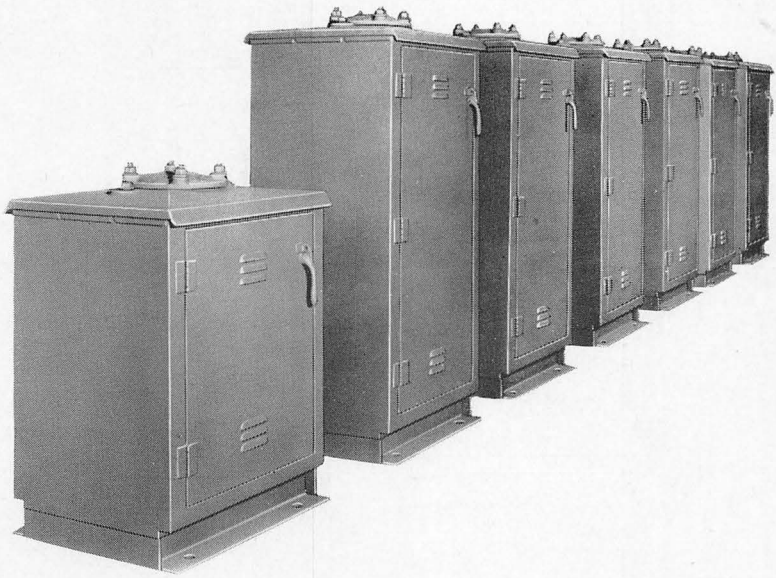
Our supply of catalog plates Section L-1001 to L-1200 inclusive is exhausted. We intend to reprint this Section as soon as necessary revisions can be made. A complete redistribution will be made after the work if off the press.

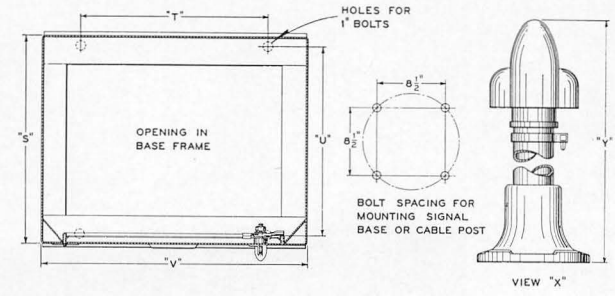
Remove Staple Before Filing Plate in Proper Sequence in Loose Leaf Covers

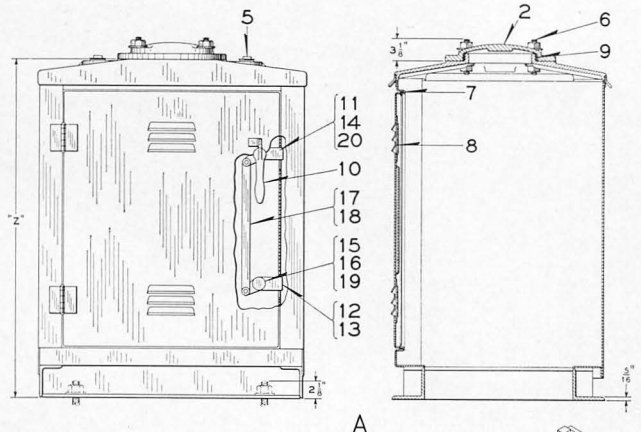


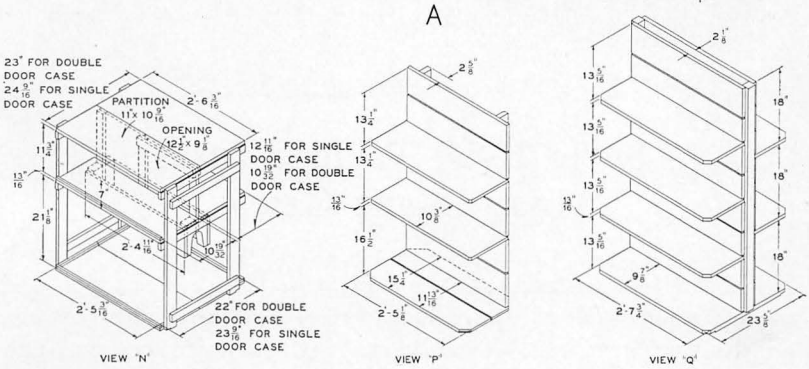
Style B-10 Welded Steel Instrument Cases

Style B-10 Instrument Cases are of welded construction and provide a solid wall with no joints or rivets for corrosion to attack. The tops are cast iron, the walls are rust resisting sheet steel and the bases are structural angles securely welded together.

These cases are interchangeable with designs shown on A.A.R. Signal Section drawings 1626B, 1627B and 1628B.







Dimensions						For Refs.
Foundation Bolt Spacing		Overall Size		Height	Opening in Base Frame	
T	U	S	V	Z		
23 7/8"	23 7/8"	2'-2 1/4"	2'-9 3/4"	3'-7"	27 19/32"x19 1/8"	A and Aa
19 1/2"	19 1/2"	16 21/32"	2'-5 1/2"	4'-4 7/8"	25 11/32"x15 7/8"	Ab
23 7/8"	23 7/8"	2'-2 1/4"	2'-9 3/4"	5'-6 1/4"	27 19/32"x19 1/8"	Ac

Style B-10 Welded Steel Instrument Cases

Style B-10 Welded Steel Instrument Cases

Unless otherwise specified cases will be furnished with Top Cover Ref. 2, Ventilator Screen Ref. 8, 1½″ Pipe Plugs Ref. 5, wood floor, no lining, and Cases painted aluminum inside and black outside.

The following alternatives can be supplied, if desired, orders should so state.

(1) Cable or signal post per view "X" (Orders should specify size of pipe and "Y" dimension).
(2) Steel floor; size and location of cable openings to be specified.
(3) Wire openings in Case (Orders should give location and size of openings.)
(4) 2″ Tapped holes in top. (Using Pipe Plugs Ref. 5a).
(5) Reversible shut off ventilators (Using Ventilator Screen Ref. 8a).

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Style "B-10" Welded Steel Instrument Case Ref..... Plate L-1158.

Piece	Ref.	Approx. Inside Dimensions		Size of Door Opening	No. of Doors	Wood Lining (If Desired Orders Should So State)	Drawing Reference
		Width	Depth				
	A	2′-9″	2′-0″	2′-3¾″x2′-8⅝″	1	View "N"	D–2500–4
	Aa	2′-9″	1′-11″	2′-3¾″x2′-8⅝″	2	View "N"	D–2500–3
	Ab	2′-5″	1′-3″	23½″x3′-9 5/16″	1	View "P"	D–2500–5
	Ac	2′-9″	1′-10″	2′-3¾″x4′-7⅞″	2	View "Q"	D–2500–2

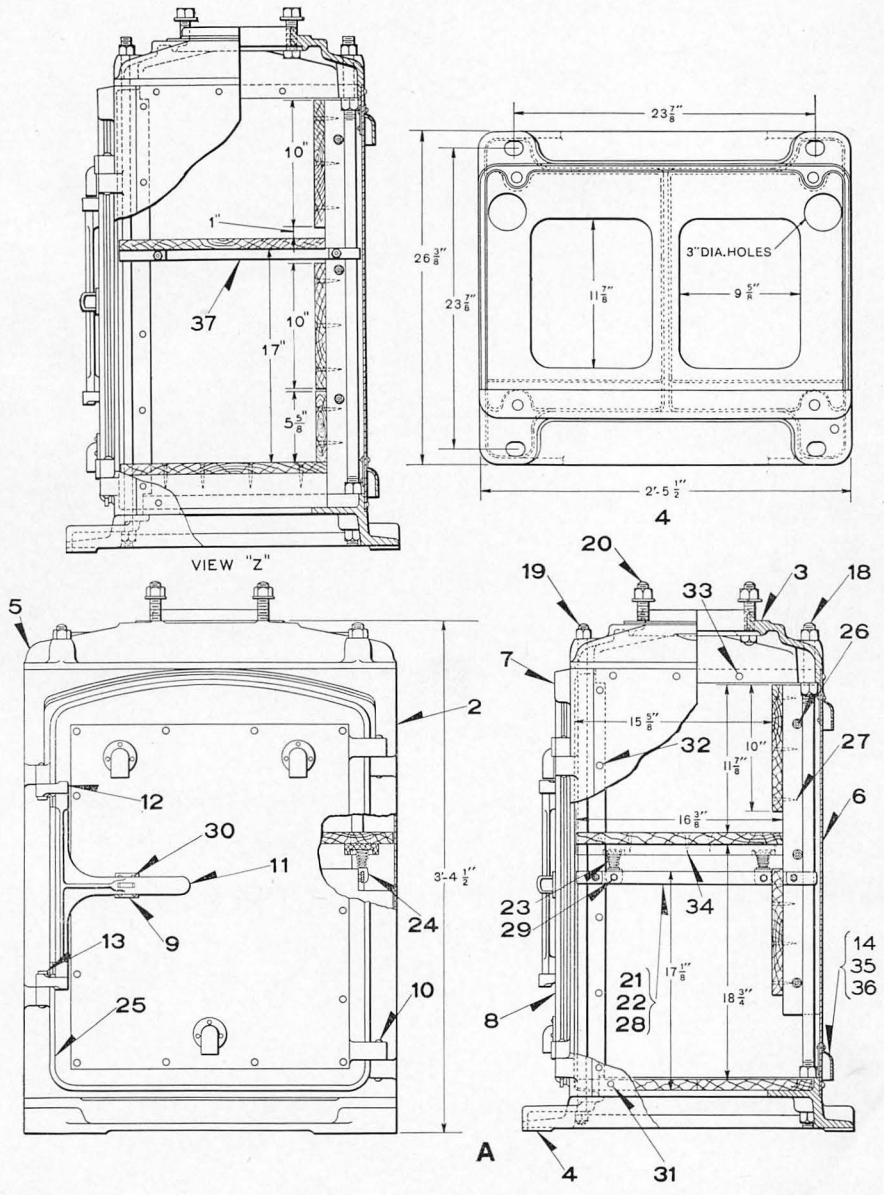
Piece	Ref.	Description	Drawing Reference
27632	**2**	**Top Cover**	C–3141–7
51264	**3**	**Name Plate** (Not shown)	8225–141
	4	**Screw,** No. 6x¼″ Rd. Hd. Hardened (Cad. Pl.) For attaching Name Plate to Door (Not shown).	
	5	**Pipe Plug,** 1½″ C. I.	
	5a	**Pipe Plug,** 2″ C. I.	
	6	**Stud,** Ref. 6a, with ⅞″ Hex. Nut, ⅞″ Hex. Jam Nut and ⅞″ S. Plate Washer	8301–3
862	**6a**	**Stud Only,** ⅞″x4¾″	8301–3
	7	**Rubber Door Packing,** 10′-0¾″ long, for Refs. A and Aa	8078–1565
	7a	**Rubber Door Packing,** 11′-5⅝″ long, for Ref. Ab	8078–1565
	7b	**Rubber Door Packing,** 14′-1½″ long, for Ref. Ac	8078–1565
198925	**8**	**Ventilator Screen** (24 Mesh)	7318–80

Style B-10 Welded Steel Instrument Cases

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
213156	**8a**	**Ventilator Screen** (24 Mesh) for reversible shut off ventilators	7318–107
24466	**9**	**Gasket**	8078–468
208937	**10**	**Handle**	8311–89
208941	**11**	**Latch** (Upper)	8237–42
208942	**12**	**Latch** (Lower)	8237–42
210469	**13**	**Washer.** Assembled on either side of lower latch to produce satisfactory compression on packing	7826–300
208958	**14**	**Washer.** Assembled on either side of upper latch to produce satisfactory compression on packing	7826–300
	15	$\frac{5}{8}$″ **Slotted Hex. Nut** (Slotted $\frac{5}{32}$″ W. x $\frac{7}{32}$″ D.).	
	16	**S. Cotter,** $\frac{1}{8}$″x1$\frac{1}{4}$″.	
212919	**17**	**Lock Bar** for Refs. A and Aa	12464–31
215676	**17a**	**Lock Bar** for Ref. Ab	12464–31
213671	**17b**	**Lock Bar** for Ref. Ac	12464–31
105888	**18**	**Stud.** For attaching Lock Bar to Latch	8115–189
	19	$\frac{5}{8}$″ **Pl. S. Lock Washer** ($\frac{13}{64}$″x$\frac{3}{32}$″).	
25079	**20**	**Washer,** $\frac{1}{8}$″ thick	7826–47



Single Instrument Case

Single Instrument Case

For Diagrams of Foundations See Plate L-1200

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	A	**Single Instrument Case with Lining** as shown, and Base Ref. 4 (With Spring Support under Shelf)	C–7589–51
192895	Aa	**Single Instrument Case with Lining** per View "Z," and Base Ref. 4a (Without Spring Support)	C–7589–51
152459	2	Case without Lining for Ref. A	C–7589–51
192894	2a	Case without Lining for Ref. Aa	C–7589–51
24466	3	**Gasket**	8078–468
2176	4	**Base** with Two 3″ Holes for Ref. A	C–3090–1
192893	4a	**Base** for Ref. Aa (Without 3″ diam. Holes)	C–3090–1
152458	5	**Top**	C–3141–41
65715	6	**Sheet Steel Plate**	C–2989–12
927	7	**Door Frame**	C–3141–25
	8	**Door with Ventilators, Staple, Rivets and Two Pins Ref. 10**	B–9733–4
904	9	**Staple** (M.I. Pat. 7443)	B–8191–1
930	10	**Pin,** $\frac{3}{8}$″x3$\frac{5}{16}$″ for attaching Door to Door Frame	B–10207–1
899	11	**Hasp** (M.I. Pat. 7382)	B–8299–1
916	12	**Link** (M.I. Pat. T-7438)	C–2989–1
931	13	**Pin,** $\frac{1}{2}$″x2$\frac{5}{8}$″ for attaching Link to Door Frame	B–8058–2
915	14	**Ventilator Hood**	B–7318–3
	18	**Stud,** $\frac{7}{8}$″x3′ 4″ with $\frac{7}{8}$″ Hex. Nuts	8301–31
129709	18a	**Stud Only,** $\frac{7}{8}$″x3′ 4″ for Ref. 18	8301–31
	19	**Stud,** $\frac{3}{4}$″x3′ 3$\frac{1}{2}$″ with $\frac{3}{4}$″ Hex. Nuts	8261–61
15905	19a	**Stud Only,** $\frac{3}{4}$″x3′ 3$\frac{1}{2}$″ for Ref. 19	8261–61

Single Instrument Case

(Continued)

For Diagrams of Foundations See Plate L-1200

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
80816	20	**Stud,** 7/8″x4 3/4″ with Std. 7/8″ Hex. Nut, 7/8″ Hex. Jam Nut and 7/8″ Std. Plate Washer	8301–3
862	20a	**Stud Only,** 7/8″x4 3/4″ for Ref. 20	8301–3
153075	21	**Shelf Support** for Ref. A	C–2989–29
47563	22	**Cap**	C–2989–1
153070	23	**Spring** for Ref. A	7770–444
153074	24	**Spring Socket** for Ref. A	8084–73
154810	24a	**Spring Socket** with Spring	8084–73
20945	25	**Tubing, 9′ 1″ Long** with No. 14 Galv. Wire 9′ 1″ Long and 1/8″x7/8″ Cotters	B–9835–2
	26	**Stove Bolt,** 1/4″x2″ with Sq. Nut and Std. 1/4″ Plate Washer.	
	27	**Wood Screw,** No. 10x2″ Flat Hd. Steel.	
	28	**Bolt,** 3/8″x1 1/4″ Hex. Hd. and 3/8″ Hex. Nut.	
	29	**Tap Bolt,** 3/8″x5/8″ Hex. Hd. S.	
	30	**Rivet,** 1/4″x1/2″ Rd. Hd. I.	
	31	**Rivet,** 1/4″x3/4″ Rd. Hd. I.	
	32	**Rivet,** 1/4″x7/8″ Rd. Hd. I.	
	33	**Rivet,** 1/4″x5/8″ Rd. Hd. I.	
	34	**Wood Screw,** No. 10x1 1/2″ Flat Hd. S.	
	35	**Rivet,** 3/16″x1/4″ Rd. Hd. I.	
173923	36	**Screen Holder and Screen**	7318–84
26174	37	**Shelf Support** for Ref. Aa	C–2989–3

Section
L

HOUSINGS

Relay and Instrument Cases, Junction Boxes, and Cable Terminal Boxes

Remove Staple Before Filing in Loose Leaf Cover

Union Switch & Signal Co.
Swissvale, Pa.

August, 1931

Printed in U.S.A.

UNION SWITCH & SIGNAL CO.

TABLE OF CONTENTS

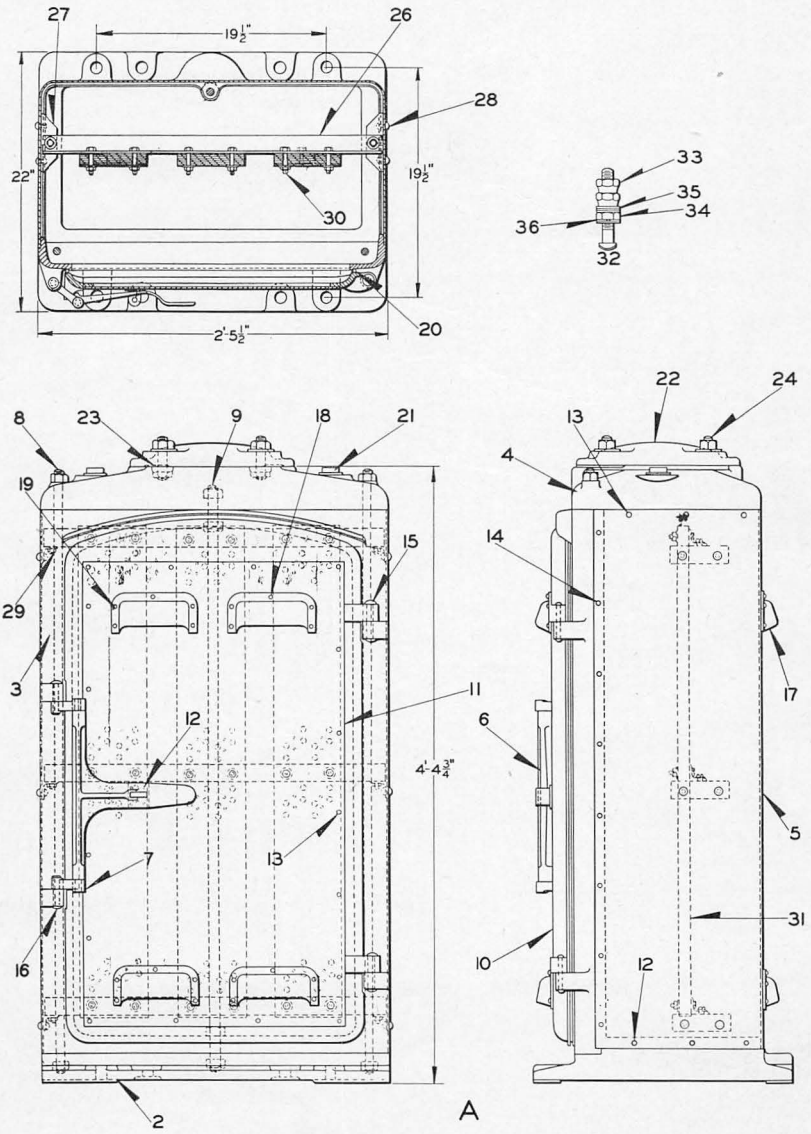
SECTION "L"

RELAY CASES, INSTRUMENT CASES, JUNCTION AND CABLE TERMINAL BOXES

	Plate
SINGLE INSTRUMENT CASE WITH THREE TERMINAL BOARDS	L-1144½
RELAY CASE (THIRD RAIL INDICATION)	L-1166
DOUBLE RELAY AND TERMINAL CASE (ARRANGED FOR FUSE BASES AND INSTRUMENT PANELS)	L-1167
VERTICAL RELAY AND TERMINAL CASES (ONE SHELF TYPE)	L-1168
DOUBLE VERTICAL RELAY AND TERMINAL CASES (THREE SHELF TYPE)	L-1169
DOUBLE VERTICAL RELAY AND TERMINAL CASES (FOUR SHELF TYPE)	L-1178
DOUBLE VERTICAL RELAY AND TERMINAL CASES (FOUR SHELF TYPE)	L-1179
JUNCTION TERMINAL BOX	L-1187
JUNCTION TERMINAL BOX	L-1187½
APPLICATION OF INSTRUMENT BOARDS TO EXISTING VERTICAL RELAY CASES	L-1205
CABLE TERMINAL BOXES (CAPACITY 34 TERMINALS)	L-1210
CABLE TERMINAL BOXES (CAPACITY 38 TERMINALS)	L-1213
CABLE TERMINAL BOXES (CAPACITY 68 TERMINALS)	L-1216
CABLE TERMINAL BOXES (CAPACITY 76 TERMINALS)	L-1219
CABLE TERMINAL BOXES (CAPACITY 76 TERMINALS)	L-1222

PLATE L-1144½

UNION SWITCH & SIGNAL CO.



SINGLE INSTRUMENT CASE

UNION SWITCH & SIGNAL CO.

SINGLE INSTRUMENT CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
171015	**A**	**Single Instrument Case** complete with 3 Terminal Boards, (Without Terminal Posts)	C–7589–23
122604	**2**	**Base only,** for Ref. A	C–3141–28
56498	**3**	**Door Frame**	C–3141–19
22689	**4**	**Top Casting**	C–3141–6
123762	**5**	**Cover Plate**	C–2989–24
899	**6**	**Hasp**	B–8299–1
1173	**7**	**Link**	D–783–1
56492	**8**	**Stud** with two ¾″ Hex. Nuts	8261–61
56491	**9**	**Stud** with Four ⅞″ Hex. Nuts	8301–20
	10	**Door** complete with four large ventilators, sheet steel Plate, Staple, Rivets and two pins, Ref. 15	C–3141–19
56499	**10a**	**Door**	C–3141–19
140227	**11**	**Door Plate**	C–2989–28
	12	**Rivet,** ¼″x¾″ Rd. Hd. I.	
	13	**Rivet,** ¼″x⅝″ Rd. Hd. I.	
	14	**Rivet,** ¼″x⅞″ Rd. Hd. I.	
930	**15**	**Pin,** ⅜″x3 5/16″	B–10207–1
931	**16**	**Pin**	B–8058–2
173845	**17**	**Ventilator Hood**	B–7318–8
172488	**17a**	**Screen**	7318–83
172487	**17b**	**Screen Holder**	7318–83
	18	**Rivet,** ¼″x⅜″ Rd. Hd. I.	

UNION SWITCH & SIGNAL CO.

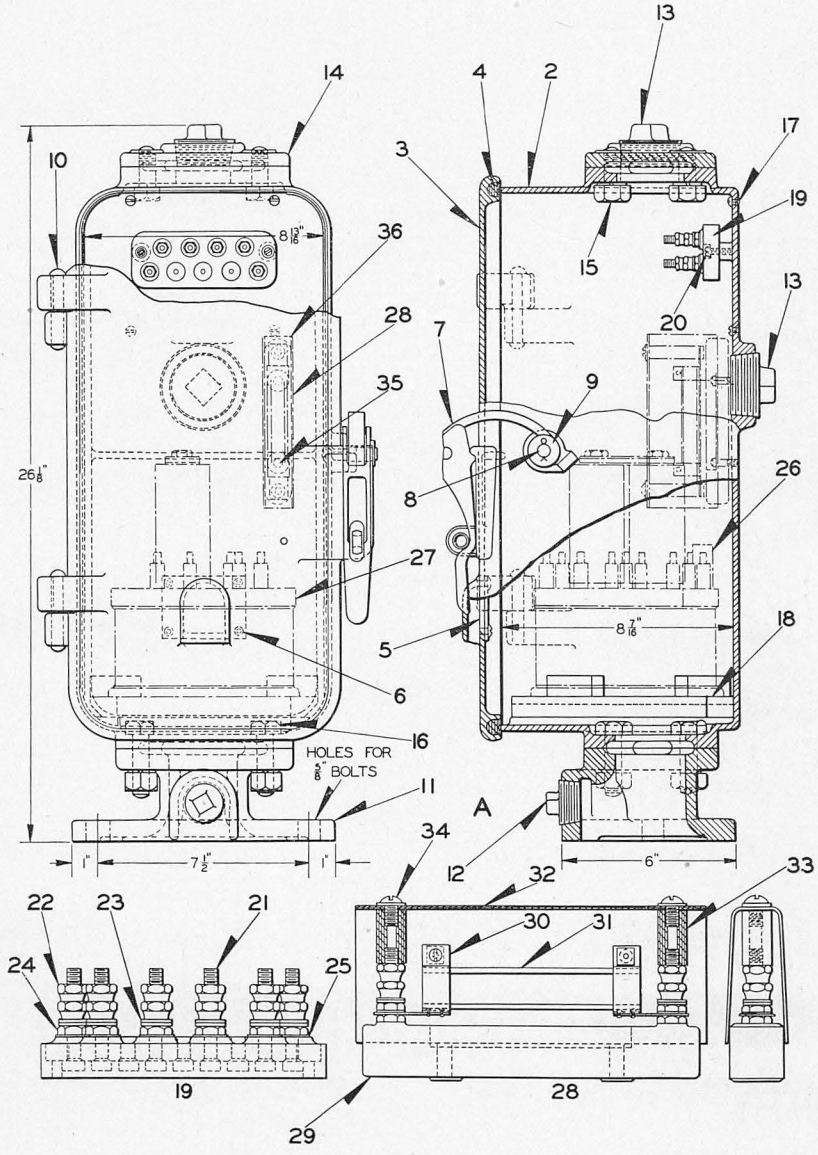
SINGLE INSTRUMENT CASE
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	19	**Rivet,** ¼″x½″ Rd. Hd. I.	
	20	**Canvas Covered Rubber Tubing, 11′ 2″ Long** with sixteen ⅛″x⅞″ Cotters and one piece No. 14 Galv. I. Wire 11′ 4″ long for Ref. A	B–9835–1
	21	**Pipe Plug,** 1½″ C. I.	
27632	**22**	**Cover**	C–3141–7
24466	**23**	**Gasket**	8078–468
862	**24**	**Stud** with ⅞″ Hex. Nut ⅞″ Hex. Jam Nut and ⅞″ Plate Washer	8301–3
904	**25**	**Staple** with four rivets Ref. 12 for Door	B–8191–1
130097	**26**	**Support**	C–7539–30
123951	**27**	**Support**	C–7539–25
	28	**Rivet,** ⅜″x½″ Rd. Hd. I.	
	29	**Bolt,** ⅜″x1″ Hex. Hd. S. with ⅜″ Hex. Nut and ⅜″ Plate Washer.	
	30	**Bolt,** ⅜″x1⅞″ Hex. Hd. S. with ⅜″ Hex. Nut and ⅜″ Plate Washer.	
123763	**31**	**Terminal Board only,** (Without Terminal Posts) Ebony Asbestos Wood	B–10364–30
	32	**Terminal Post** with Nuts ¼″ Plain S. Lock Washers (⅛″x$\frac{1}{16}$″) and Washers (Inc. 1-32a, 2-33, 1-34, 4-35 and 1-36)	12451–
31668	**32a**	**Terminal Post only,** for Ref. 32	8094–706
29101	**33**	**Nut**	8109–193
29103	**34**	**Nut**	8109–194
29102	**35**	**Washer**	7828–139
	36	**Lock Washer,** ¼″ Plain S. (⅛″x$\frac{1}{16}$″).	

PLATE L-1166

UNION SWITCH & SIGNAL CO.



RELAY CASE

UNION SWITCH & SIGNAL CO.

RELAY CASE

(THIRD RAIL INDICATION CASE)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
166134	**A**	**Relay Case** complete with Shelf and Terminal Board (Does not include Refs. 26 to 36)	C–7538–29
167739	**2**	**Case**	C–9060–22
159863	**3**	**Door** with Staple, Flax Packing and Ventilator	C–9060–23
	4	**Flax Packing, 3/8″x3/8″x4′ 8″** for Ref. 3.	
21918	**5**	**Screen Holder**	B–7318–5
21919	**5a**	**Screen**	B–7318–5
	6	**Machine Screw, No. 10-30x1/4″** Rd. Hd. S. (Cad. Pl.).	
163359	**7**	**Hasp** complete with Spring	8299–116
163590	**8**	**Stud** with Washer Ref. 9 and 1/8″x3/4″ S. Cotter (Cad. Pl.)	8115–118
25054	**9**	**Washer** for Ref. 8	7826–1
49635	**10**	**Pin** for fastening Door to Case	B–10207–1
158574	**11**	**Base**	C–9060–20
	12	**Pipe Plug, 1 1/4″** C. I.	
	13	**Pipe Plug, 2″** C. I.	
167649	**14**	**End Cover**	C–9060–34
	15	**Tap Bolt, 5/8″-11x1 1/8″** Hex. Hd. (Cad. Pl.) with 5/8″ Pl. S. Lock Washer (3/16″x3/32″) (Cad. Pl.).	
	16	**Machine Bolt, 5/8″-11x2 1/8″** Hex. Hd. (Cad. Pl.) with 5/8″ Hex. Nut (Cad. Pl.) and 5/8″ Pl. S. Lock Washer (3/16″x3/32″) (Cad. Pl.).	
	17	**Machine Screw, No. 10-30x1/4″** Rd. Hd. S. (Cad. Pl.).	
166126	**18**	**Shelf**	12443–175
156205	**19**	**Terminal Board,** complete with six Terminal Posts	9968–917
156062	**19a**	**Terminal Board only,** for Ref. 19	9968–916

UNION SWITCH & SIGNAL CO.

RELAY CASE
(Continued)

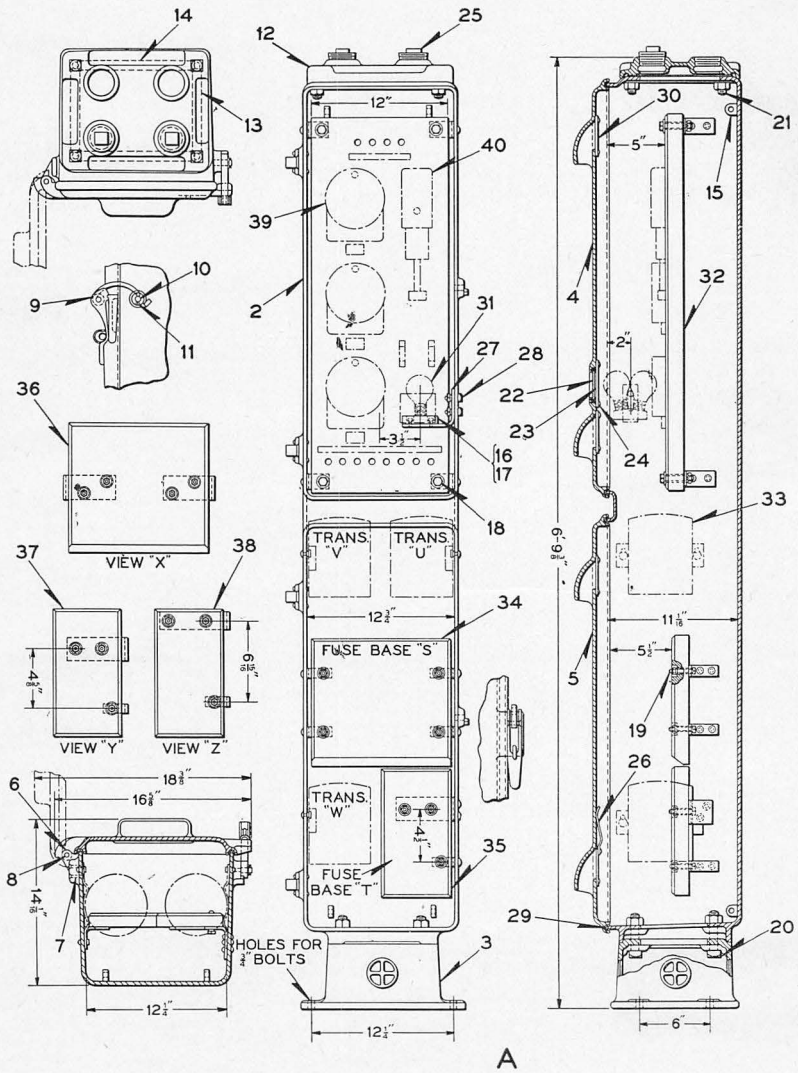
(THIRD RAIL INDICATION CASE)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	20	**Machine Screw, No. 14-24x1″** Fil. Hd. S. (Cad. Pl.) with Washer Ref. 20a.	
52335	**20a**	**Washer**	7828–184
	21	**Terminal Post** complete with Nuts and Washers (Inc. 1-21a, 2-22, 2-23, 1-24 and 1-25)	12451–
122782	**21a**	**Terminal Post only,** for Ref. 21	8094–1192
29101	**22**	**Nut**	8109–193
29102	**23**	**Washer**	7828–139
29103	**24**	**Nut**	8109–194
29104	**25**	**Washer**	7828–138
63611	**26**	**Terminal Post Shield** for H. V. Posts (For details refer to Plate P-7300)	8095–564
	27	**Model 13 Relay** (When ordering refer to Section "E" Catalog)	C–8187–
165739	**28**	**Resistor,** 40,000-Ohms, complete with Cover	9065–210
177273	**28a**	**Resistor,** 7,000-Ohms, without Cover	9065–210
130587	**29**	**Block** with Terminal Posts	9065–65
165766	**30**	**Bracket**	11893–528
165767	**31**	**Resistance Rod** (40,000-Ohms)	9065–211
177272	**31a**	**Resistance Rod** (7,000-Ohms)	9065–211
167736	**32**	**Cover**	8750–2424
167737	**33**	**Bushing**	8095–685
	34	**Machine Screw, No. 14-24x⅜″** Rd. Hd. Br. (N. P.) with Washer Ref. 23.	
	35	**Machine Screw, No. 12-28x⅞″** Rd. Hds. (Cad. Pl.).	
114118	**36**	**Gasket**	8078–1362

PLATE L-1167

UNION SWITCH & SIGNAL CO.



STEEL RELAY AND TERMINAL CASE

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
171872	**A**	**Double Vertical Relay and Terminal Case** with Lamp Receptacle and Lamps Ref. 31, Without Fuse Bases, Instrument Panel and Transformers	C–7538–30
171873	**Aa**	**Double Vertical Relay and Terminal Case** with Lamp Receptacle and Lamps Ref. 31, Without Fuse Bases, Instrument Panel and Transformers	C–7538–30
171874	**Ab**	**Double Vertical Relay and Terminal Case** with Lamp Receptacle and Lamps Ref. 31, Without Fuse Bases, Instrument Panel and Transformers	C–7538–30
172411	**Ac**	**Double Vertical Relay and Terminal Case** with Lamp Receptacle and Lamps Ref. 31, Without Fuse Bases, Instrument Panel and Transformers	C–7538–30
172709	**2**	**Case** for Ref. A, arranged for Instrument Panel, Fuse Bases "S" and "T" and Transformers as shown	C–7539–53
172711	**2a**	**Case** for Ref. Aa, arranged for Instrument Panel, Fuse Base "S" per View "X," Fuse Base "T" per view "Y" and Transformers	C–7539–53
172713	**2b**	**Case** for Ref. Ab, arranged for Instrument Panel, Fuse Base "S" as shown, Fuse Base "T" per view "Z" and Transformers	C–7539–53
172715	**2c**	**Case** for Ref. Ac, arranged for Instrument Panel, Fuse Base "S" per View "X," Fuse Base "T" as shown and Transformers	C–7539–53
143951	**3**	**Base** (With four knockouts)	C–7539–34
172414	**4**	**Door** complete with Staple, Ventilators and Flax Packing	C–7539–52
154575	**5**	**Door** complete with Staple, Ventilators and Flax Packing	C–7539–41
119936	**6**	**Door Hinge**	12426–13

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASE (Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

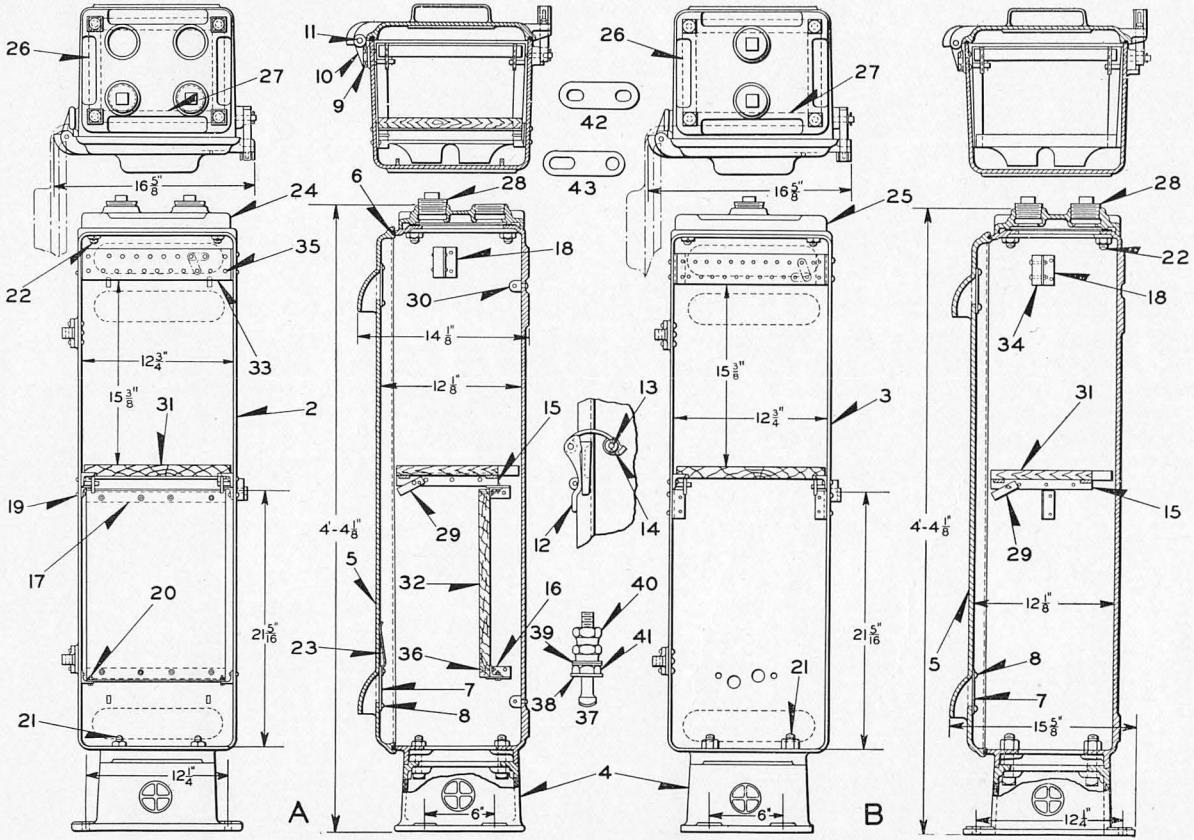
Piece	Ref.	Description	Drawing Reference
	7	**Rivet, 1/4″x1 3/8″** Csk. Hd. I.	
49635	**8**	**Pin**	B–10207–1
163359	**9**	**Hasp** complete with Spring	8299–116
163590	**10**	**Stud** with Washer Ref. 11 and 1/8″x3/4″ Cotter Pin	8115–118
25054	**11**	**Washer**	7826–1
158037	**12**	**Top Cover**	C–7539–42
158713	**13**	**Gasket**	8078–795
158714	**14**	**Gasket**	8078–795
49652	**15**	**Staple**	8191–76
87214	**16**	**Lamp Receptacle**	B–9954–11
	17	**Machine Screw, No. 10-30x5/8″** Fil. Hd. Br. (N. P.).	
	18	**Machine Bolt, 1/2″x2 1/2″** Hex. Hd. S. (Cad. Pl.) with 1/2″ Hex. Nut, 1/2″ Plate Washer and 1/2″ Pl. S. Lock Washer (3/16″x3/32″) Cad. Pl.	
	19	**Machine Bolt, 5/16″x1 3/4″** Hex. Hd. S. (Cad. Pl.) with 5/16″ Hex. Nut, 5/16″ Plate Washer and 5/16″ Pl. S. Lock Washer (1/8″x3/32″) (Cad. Pl.).	
	20	**Machine Bolt, 3/4″x3 1/4″** Sq. Hd. S. with Hex. Nut.	
	21	**Machine Bolt, 5/8″x2″** Sq. Hd. S. with Hex. Nut.	
83324	**22**	**Roundel, 2 7/8″** Diam. (Purple)	8468–2
94292	**23**	**Roundel Ring**	B–7632–25
	24	**Machine Screw, 1/4″-20x3/8″** Rd. Hd. S. with 1/4″ Plate Washer.	

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASE
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	25	**Pipe Plug, 2″ C. I.**	
165209	26	**Clip**	8124–236
172458	27	**Bracket**	10914–333
	28	**Bolt, ¼″x1″** Sq. Hd. (Cad. Pl.) with ¼″ Sq. Nut and ¼″ Pl. S. Lock Washer (⅛″x$\frac{1}{16}$″).	
	29	**Flax Packing, ⅜″x⅜″x7′ 10½″** for Refs. 4 and 5.	
32530	30	**Screen Holder**	B–7318–5
5730	30a	**Screen**	B–7318–2
	30b	**Machine Screw, No. 14-24x$\frac{7}{16}$″** Rd. Hd. S. for Refs. 30 and 30a.	
95268	31	**Lamp Bulb,** 120-Volts, 36-Watts, Medium Screw Base	B–12409–6
	32	**Instrument Panel.**	
	33	**Current Transformer.**	
	34	**Fuse Base (K-6065566).**	
	35	**Fuse Base (K-6065567).**	
	36	**Fuse Base (K-6065568).**	
	37	**Fuse Base (K-6065569).**	
	38	**Fuse Base (K-6065565).**	
	39	**Type IA Current Relay.**	
	40	**Type PQ Circuit Closing Relay.**	



VERTICAL RELAY AND TERMINAL CASES

UNION SWITCH & SIGNAL CO.

VERTICAL RELAY AND TERMINAL CASES

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
154577	**A**	**Vertical Relay and Terminal Case** complete with Shelf, Instrument and Terminal Boards (Without Terminal Posts)	C–7538–20
154576	**Aa**	**Vertical Relay and Terminal Case only,** without shelf, Terminal and Instrument Boards	C–7538–20
158963	**B**	**Vertical Relay and Terminal Case** complete with one shelf and one Terminal Board (Without Terminal Posts) and drilled for Mounting Stop Valve, Plate N-895)	C–7538–23
158962	**Ba**	**Vertical Relay and Terminal Case** without shelf and Terminal Boards, drilled for mounting Stop Valve, Plate N-895)	C–7538–23
154571	**2**	**Case only,** for Refs. A and Aa	C–7539–43
158966	**3**	**Case only,** for Refs. B and Ba	C–7539–44
143951	**4**	**Base only,** for Refs. A, Aa, B and Ba (With four knockouts)	C–7539–34
154573	**5**	**Door** with Staple and Flax Packing	C–7539–40
	6	**Flax Packing, 3/8″x3/8″x9′ 5″ Long** for Ref. 5.	
32530	**7**	**Holder** for Ref. 5	B–7318–5
5730	**7a**	**Screen** for Ref. 5	B–7318–2
	8	**Machine Screw No. 14-24x7/16″** Rd. Hd. S. for Refs. 7 and 7a.	
	9	**Rivet, 1/4″x1 3/8″** Csk. Hd. I.	
119936	**10**	**Door Hinge**	12426–13
49635	**11**	**Pin** for fastening door to case	B–10207–1

UNION SWITCH & SIGNAL CO.

VERTICAL RELAY AND TERMINAL CASES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
163359	**12**	**Hasp** complete with Spring	8299–116
163590	**13**	**Stud** with Washer Ref. 14 and Cotter Pin 1/8″x3/4″	8115–118
25054	**14**	**Washer** for Ref. 13	7826–1
127941	**15**	**L. H. Support** with Stud Ref. 15b	C–7539–30
127942	**15a**	**R. H. Support** with Stud Ref. 15b	C–7539–30
127939	**15b**	**Stud** with 1/8″x3/4″ S. Cotter for Refs. 15 and 15a	8115–194
158164	**16**	**Support**	C–7539–37
158162	**17**	**Support**	C–7539–37
143954	**18**	**Support**	C–7539–30
	19	**Rivet, 1/4″x5/8″** Rd. Hd. I.	
	20	**Bolt, 1/4″x3/4″** Hex. Hd. S. with 1/4″ Hex. Nut and 1/4″ Plain S. Lock Washer (1/8″x1/16″).	
	21	**Bolt, 3/4″x3 1/4″** Sq. Hd. S. with 3/4″ Hex. Nut.	
	22	**Bolt, 5/8″x2″** Sq. Hd. with 5/8″ Hex. Nut.	
165209	**23**	**Clip**	8124–236
	23a	**Machine Screw No. 14-24x7/16″** Rd. Hd. S. for Ref. 23.	
158037	**24**	**Top Cover** for Refs. A and Aa	C–7539–42
158038	**25**	**Top Cover** for Refs. B and Ba	C–7539–42
158713	**26**	**Gasket**	8078–795
158714	**27**	**Gasket**	8078–795
	28	**Pipe Plug, 2″** C. I.	

UNION SWITCH & SIGNAL CO.

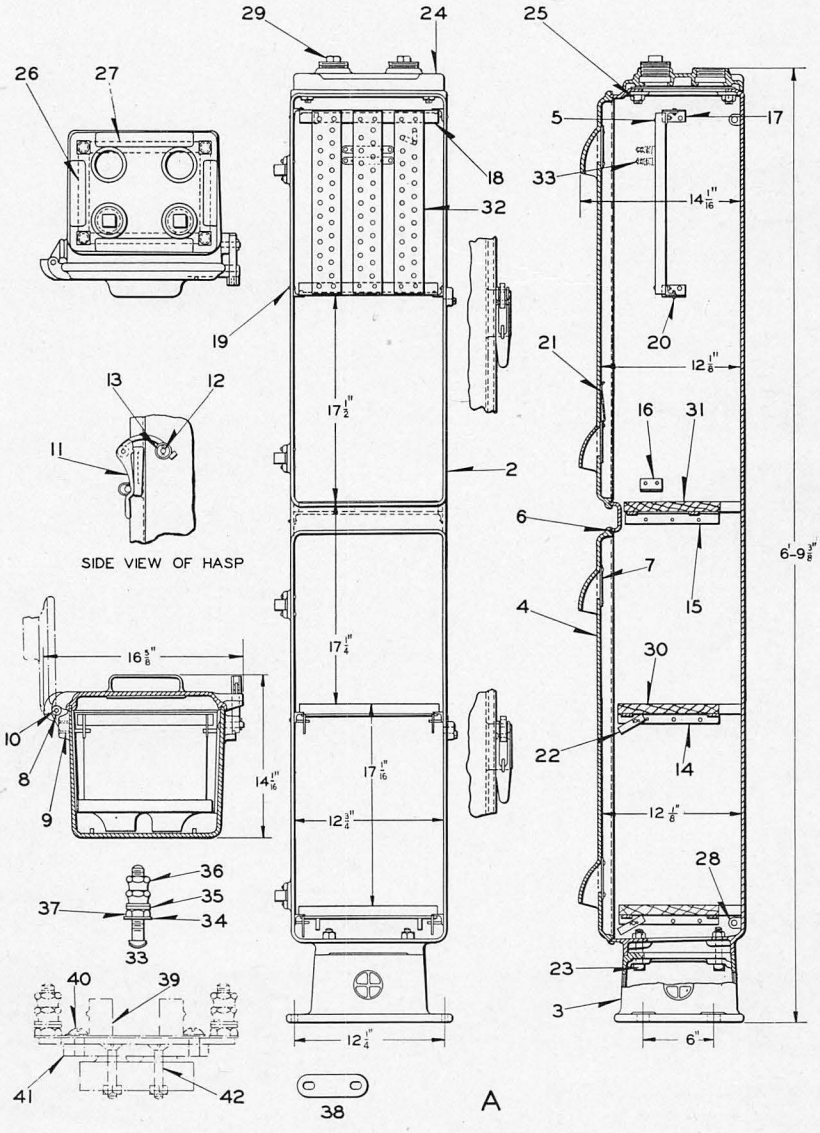
VERTICAL RELAY AND TERMINAL CASES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
127938	**29**	**Stop**	C–7539–30
49652	**30**	**Staple**	8191–76
127934	**31**	**Shelf**	12443–92
158044	**32**	**Instrument Board**	12443–158
164333	**33**	**Terminal Board** (Without Terminal Posts) for Refs. A and Aa	B–10364–57
158025	**34**	**Terminal Board** (Without Terminal Posts) for Refs. B and Ba	B–10364–57
	35	**Stove Bolt, 1/4"x1 1/4"** Rd. Hd. S. with Sq. Nut and 1/4" Plain S. Lock Washer (1/8"x1/16") for Refs. 33 and 34.	
	36	**Stove Bolt, 1/4"x1 1/4"** Rd. Hd. S. with Sq. Nut, 3/16" Std. Plate Washer and 1/4" Plain S. Lock Washer (1/8"x1/16") Cad. Pl.	
	37	**Terminal Post** with Nuts and Washers (Inc. 1-37a, 1-38, 2-39, 2-40 and 1-41)	12451–
130593	**37a**	**Terminal Post only,** for Ref. 37	8094–1192
29104	**38**	**Washer**	7828–138
29102	**39**	**Washer**	7828–139
29101	**40**	**Nut**	8109–193
29103	**41**	**Nut**	8109–194
120343	**42**	**Connector**	8064–305
163682	**43**	**Connector**	8064–693

PLATE L-1169

UNION SWITCH & SIGNAL CO.



DOUBLE VERTICAL RELAY AND TERMINAL CASE

UNION SWITCH & SIGNAL CO.

DOUBLE VERTICAL RELAY AND TERMINAL CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
154579	**A**	**Double Vertical Relay and Terminal Case** complete with 3 shelves and 3 Terminal Boards (Without Terminal Posts) with 2″ Pipe Taps in Cover	C–7538–21
154578	**Aa**	**Double Vertical Relay and Terminal Case** without shelves and Terminal Boards, with 2″ Pipe Taps in Cover, for Ref. A	C–7538–21
171905	**Ab**	**Double Vertical Relay and Terminal Case** complete with 3 shelves and 3 Terminal Boards (Without Terminal Posts) with 2½″ Pipe Taps in Cover	C–7538–21
171904	**Ac**	**Double Vertical Relay and Terminal Case** without shelves and Terminal Boards, with 2½″ Pipe Taps in Cover for Ref. Ab	C–7538–21
154569	**2**	**Case only**, for Refs. A, Aa, Ab and Ac	C–7539–38
143951	**3**	**Base only** (With four knockouts)	C–7539–34
154575	**4**	**Door** with Staple and Flax Packing	C–7539–41
	5	**Stove Bolt, ¼″x1¼″** Rd. Hd. with ¼″ Sq. Nut and ¼″ Plain S. Lock Washer (⅛″x$\frac{1}{16}$″).	
	6	**Flax Packing, ⅜″x⅜″x7′ 10½″ Long** for Ref. 4.	
32530	**7**	**Holder** for Ref. 4	B–7318–5
5730	**7a**	**Screen** for Ref. 4	B–7318–2
	7b	**Machine Screw No. 14-24x$\frac{7}{16}$″** Rd. Hd. S. for Refs. 7 and 7a.	
119936	**8**	**Door Hinge**	12426–13
	9	**Rivet, ¼″x1⅜″** Csk. Hd. I.	
49635	**10**	**Pin, ⅜″x2⅞″** for fastening Door to Case	B–10207–1

PLATE L-1169

UNION SWITCH & SIGNAL CO.

DOUBLE VERTICAL RELAY AND TERMINAL CASE (Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
163359	**11**	**Hasp** complete with Spring	8299–116
163590	**12**	**Stud** with Cotter Pin, 1/8″x3/4″ and Washer Ref. 13.	8115–118
25054	**13**	**Washer** for Ref. 12	7826–1
127941	**14**	**L. H. Support,** with Stud Ref. 14b	C–7539–30
127942	**14a**	**R. H. Support,** with Stud Ref. 14b	C–7539–30
127939	**14b**	**Stud** with 1/8″x3/4″ Cotter for Refs. 14 and 14a	8115–194
127902	**15**	**Support**	C–7539–30
127940	**16**	**Support**	C–7539–30
158164	**17**	**Support**	C–7539–37
158163	**18**	**Support**	C–7539–37
	19	**Rivet,** 1/4″x5/8″ Rd. Hd. I.	
	20	**Bolt,** 1/4″x3/4″ with 1/4″ Hex. Nut and 1/4″ Plain S. Lock Washer (1/8″x1/16″).	
165209	**21**	**Clip**	8124–236
	21a	**Machine Screw No. 14-24x7/16″** Rd. Hd. S. for Ref. 21.	
127938	**22**	**Stop**	C–7539–30
	23	**Bolt,** 3/4″x3 1/4″ Sq. Hd. with 3/4″ Hex. Nut.	
158037	**24**	**Top Cover** for Ref. A	C–7539–42
168474	**24a**	**Top Cover** for Ref. Ab	C–7539–50
	25	**Bolt,** 5/8″x2″ Sq. Hd. with 5/8″ Hex. Nut.	
158713	**26**	**Gasket**	8078–795
158714	**27**	**Gasket**	8078–795

UNION SWITCH & SIGNAL CO.

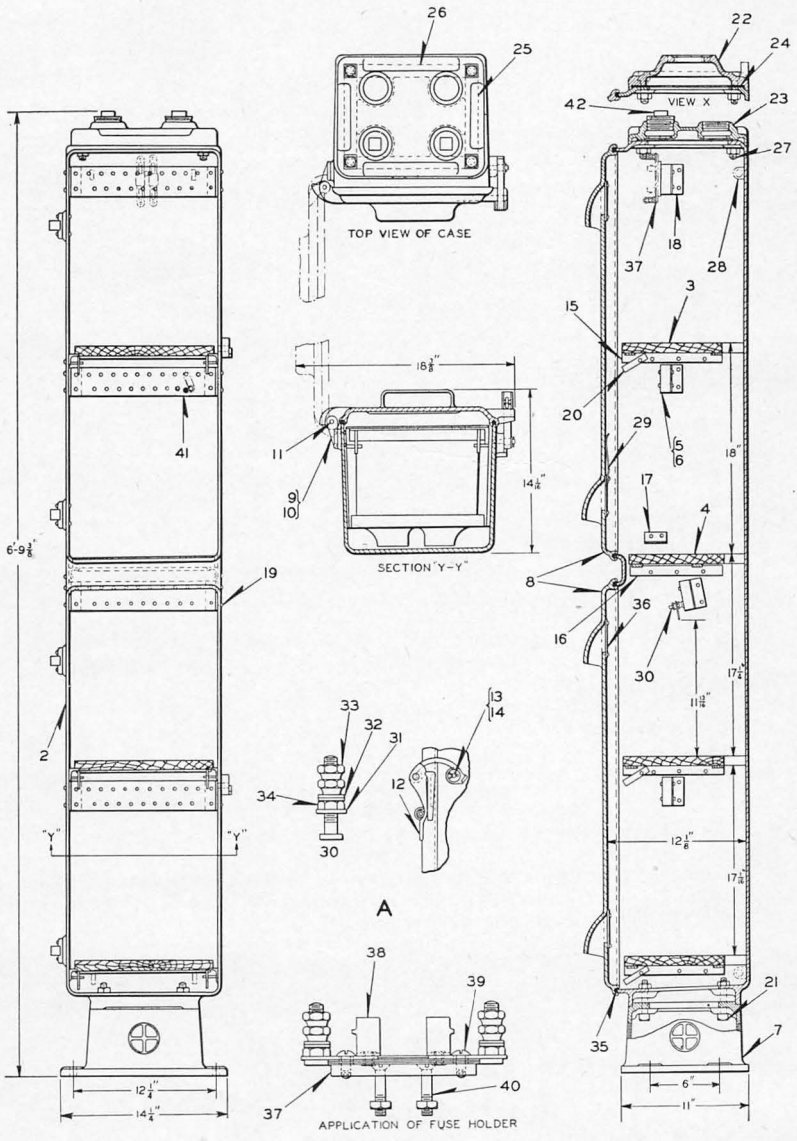
DOUBLE VERTICAL RELAY AND TERMINAL CASE (Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
49652	**28**	**Staple**	8191–76
	29	**Pipe Plug 2″**, C. I. for Ref. 24.	
	29a	**Pipe Plug 2½″**, C. I. for Ref. 24a.	
127934	**30**	**Shelf**	12443–92
127935	**31**	**Shelf**	12443–93
164332	**32**	**Terminal Board** (Without Terminal Posts)	B–10364–57
	33	**Terminal Post** with Nuts and Washers (Inc. 1-33a, 1-34, 2-35, 2-36 and 1-37)	12451–
130593	**33a**	**Terminal Post only**, for Ref. 33	8094–1192
29104	**34**	**Washer**	7828–138
29102	**35**	**Washer**	7828–139
29101	**36**	**Nut**	8109–193
29103	**37**	**Nut**	8109–194
120343	**38**	**Connector**	8064–305
132836	**39**	**Fuse Holder** complete	8064–584
	40	**Machine Screw No. 12-28x½″** Rd. Hd. S. with Washer Ref. 40a.	
36073	**40a**	**Washer**, for Ref. 40	7828–161
164350	**41**	**Two Way Fuse Adapter**	8750–2354
	42	**Machine Screw No. ¼″-20x1⅛″** Flat Hd. S. with Sq. Nut Ref. 42a.	
158972	**42a**	**Sq. Nut** for Ref. 42	8265–232

PLATE L-1178

UNION SWITCH & SIGNAL CO.



DOUBLE VERTICAL RELAY AND TERMINAL CASE

UNION SWITCH & SIGNAL CO.

DOUBLE VERTICAL RELAY AND TERMINAL CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
154581	**A**	**Double Vertical Relay and Terminal Case** complete, with Top Cover as shown	C–7538–22
164421	**Aa**	**Double Vertical Relay and Terminal Case** complete, with Top Cover per View "X" (arranged for mounting Light Signals)	C–7538–22
154570	**2**	**Case only** for Refs. A and Aa	C–7539–39
127934	**3**	**Shelf** with Straps and Wood Screws	12443–92
127935	**4**	**Shelf** with Straps and Wood Screws	12443–93
164333	**5**	**Terminal Board**	B–10364–57
	6	**Stove Bolt, 1/4"x1 1/4"** Rd. Hd. (Cad. Pl.) with 1/4" Sq. Nut and 1/4" Plain S. Lock Washer (1/8"x 1/16") for Ref. 5.	
143951	**7**	**Base**	C–7539–34
154575	**8**	**Door** with Screens and Holders (Inc. 2-36, 2-36a and 10-36b)	C–7539–41
119936	**9**	**Door Hinge**	12426–13
	10	**Rivet, 1/4"x1 3/8"** Csk. Hd. I. for Ref. 9.	
49635	**11**	**Pin** for fastening door to hinge	B–10207–1
163359	**12**	**Hasp**	8299–116
163590	**13**	**Stud** with 1/8"x3/4" Cotter S.	8115–118
25054	**14**	**Washer** for Ref. 13	7826–1
127941	**15**	**L. H. Support**	C–7539–30
127942	**15a**	**R. H. Support**	C–7539–30

UNION SWITCH & SIGNAL CO.

DOUBLE VERTICAL RELAY AND TERMINAL CASE (Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
127902	**16**	**Support**	C–7539–30
127940	**17**	**Support**	C–7539–30
143954	**18**	**Support**	C–7539–30
	19	**Rivet, 1/4″x5/8″** Rd. Hd. I.	
127938	**20**	**Stop** with 1/8″x3/4″ S. Cotter	C–7539–30
	21	**Machine Bolt, 3/4″x3 1/4″** Sq. Hd. S. with 3/4″ Hex. Nut.	
164367	**22**	**Adapter** for Ref. Aa	C–9060–33
158037	**23**	**Top Cover** for Ref. A	C–7539–42
164508	**24**	**Gasket** for Ref. 22	8078–795
158713	**25**	**Gasket** for Ref. 23	8078–795
158714	**26**	**Gasket**	8078–795
	27	**Machine Bolt, 5/8″x2″** Sq. Hd. S. with 5/8″ Hex. Nut	
49652	**28**	**Staple**	8191–76
165209	**29**	**Clip**	8124–236
	29a	**Machine Screw, No. 14-24x 7/16″** Rd. Hd. S. for Ref. 29.	
	30	**Terminal Post with Nuts and Washers** (Inc. 1-31a, 1-32, 2-33, 2-34 and 1-35)	12451–
130593	**30a**	**Terminal Post only** for Ref. 30	8094–1192
29104	**31**	**Washer**	7828–138

UNION SWITCH & SIGNAL CO.

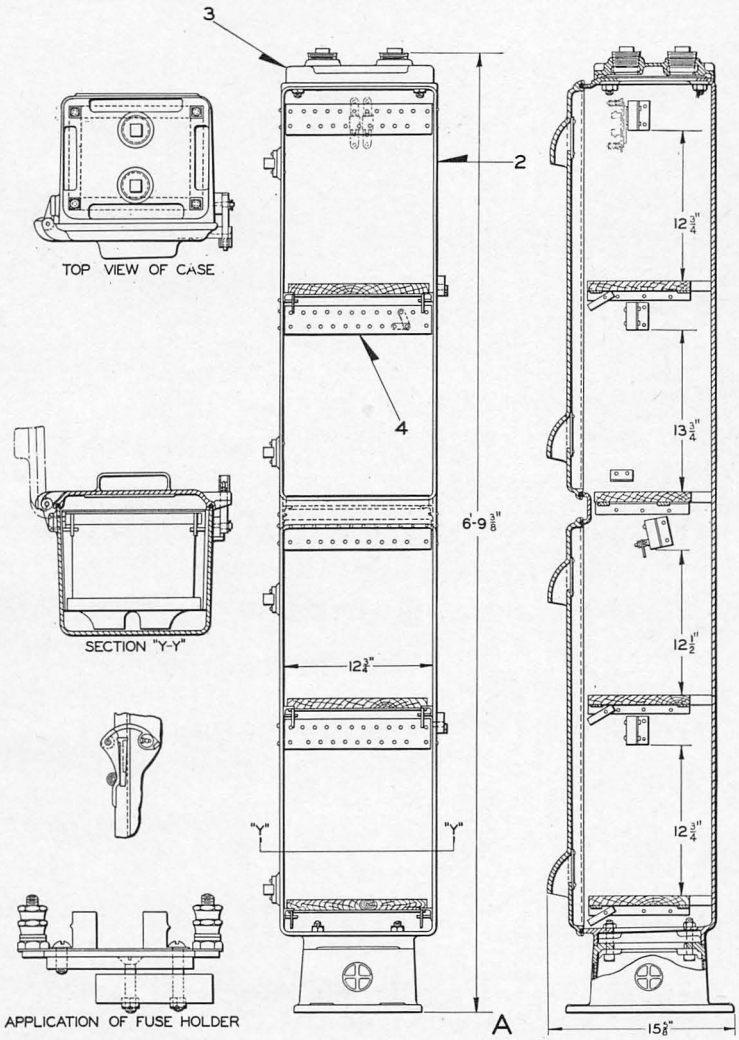
DOUBLE VERTICAL RELAY AND TERMINAL CASE (Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
29102	**32**	**Washer**	7828–139
29101	**33**	**Nut**	8109–193
29103	**34**	**Nut**	8109–194
	35	**Flax Packing, 3/8″x3/8″x7′ 10½″ long.**	
32530	**36**	**Holder**	B–7318–5
5730	**36a**	**Screen**	B–7318–2
	36b	**Machine Screw, No. 14-24x7/8″** Rd. Hd. S.	
164350	**37**	**Two Way Fuse Adapter**	8750–2354
132836	**38**	**Fuse Holder** with Terminal Posts	8064–584
	39	**Machine Screw, No. 12-28x½″** Rd. Hd. S. with Washer Ref. 39a for fastening Ref. 38 to Ref. 37.	
36073	**39a**	**Washer** for Ref. 39	7828–161
	40	**Machine Screw, ¼″-20x1⅛″** Flat Hd. S. with Sq. Nut Ref. 40a for fastening Ref. 37 to Support.	
158972	**40a**	**Square Nut**	8265–232
120343	**41**	**Terminal Connector**	8064–305
	42	**Pipe Plug 2″**	

PLATE L-1179

UNION SWITCH & SIGNAL CO.



FOR ALL OTHER REFERENCES AND DIMENSIONS REFER TO PLATE L-1178

DOUBLE VERTICAL RELAY AND TERMINAL CASE

UNION SWITCH & SIGNAL CO.

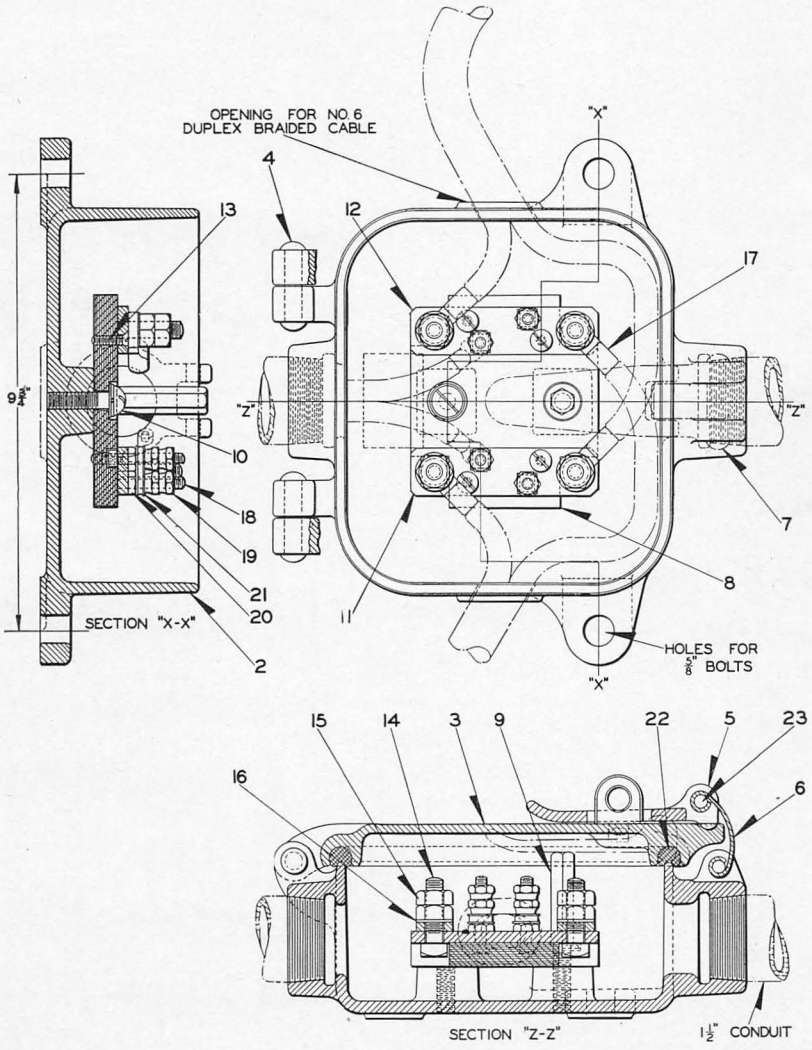
DOUBLE VERTICAL RELAY AND TERMINAL CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
158941	**A**	**Double Vertical Relay and Terminal Case** complete with Four Shelves and Four Terminal Boards (Without Terminal Posts)	C–7538–28
158961	**Aa**	**Double Vertical Relay and Terminal Case** without Shelves and Terminal Boards for Ref. A	C–7538–28
162973	**2**	**Case only,** for Refs. A and Aa	C–7539–39
158038	**3**	**Top Cover** for Refs. A and Aa	C–7539–42
158025	**4**	**Terminal Board only,** (without Terminal Posts)	B–10364–52
		(For other details and dimensions refer to Plate L-1178).	

PLATE L-1187

UNION SWITCH & SIGNAL CO.



A

JUNCTION TERMINAL BOX

UNION SWITCH & SIGNAL CO.

JUNCTION TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
165366	**A**	**Junction Terminal Box** complete, with Terminals, as shown (without Connectors Ref. 24)	C–6676–20
165363	**2**	**Box only,** for Ref. A	C–6677–19
	3	**Cover** with Gasket Ref. 22 for Ref. A	C–6677–18
	4	**Rivet, 3/8″x1 3/4″** Rd. Hd. I. for attaching Cover to Door	
	5	**Hasp** with Link Ref. 6	8299–95
137444	**5a**	**Hasp only** for Ref. 5	8299–95
83939	**6**	**Hasp Link only**	11031–5
	7	**Rivet, 5/16″x1 7/8″** Rd. Hd. I. for attaching Hasp Link to Case.	
165365	**8**	**Terminal Block**	8750–2393
165656	**9**	**Stud** with Washer Ref. 10a and 3/8″ Plain S. Lock Washer (5/32″x1/16″) Cad. Pl.	8115–219
	10	**Machine Screw, 3/8″-16x1″** Rd. Hd. S. with Washer Ref. 10a and 3/8″ Plain S. Lock Washer (5/32″x1/16″) Cad. Pl.	
62222	**10a**	**Washer only** for Ref. 10	7826–180
165364	**11**	**Bus Bar R. H.**	8064–696
165926	**12**	**Bus Bar L. H.**	8064–696
	13	**Machine Screw No. 14-24x3/4″** Flat Hd. S. (Cad. Pl.) for attaching Bus Bars to Terminal Block.	
	14	**Terminal Post** with Nuts and Washers (Inc. 1-14a, 2-15 and 1-16)	12451–
164818	**14a**	**Terminal Post only,** for Ref. 14	8094–2272

UNION SWITCH & SIGNAL CO.

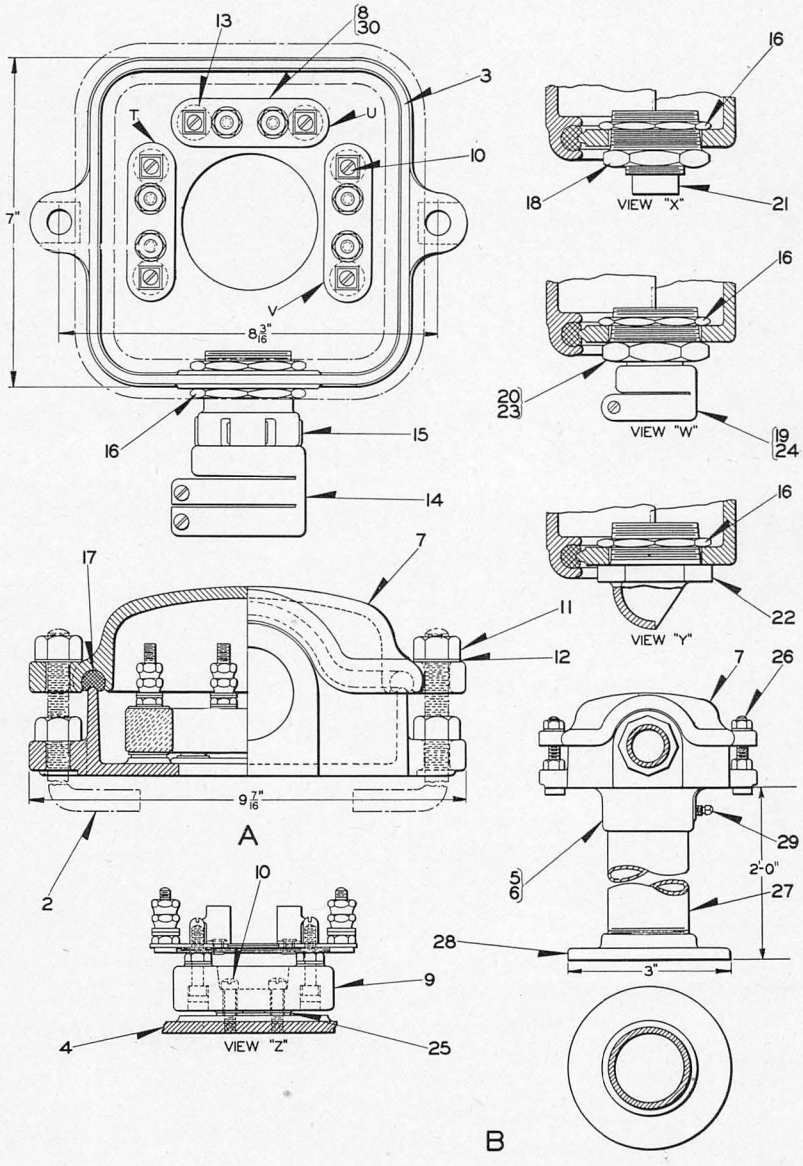
JUNCTION TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
534	**15**	**Nut**	8109–29
44407	**16**	**Washer**	7828–184
2600	**17**	**Terminal Connector** for No. 6 Stranded Wire	8064–29
	18	**Terminal Post** with Nuts and Washers (Inc. 1-18a, 2-19, 1-20 and 2-22)	12451–
150173	**18a**	**Terminal Post only,** for Ref. 18	8094–2207
29101	**19**	**Nut**	8109–193
29103	**20**	**Nut**	8109–194
29102	**21**	**Washer**	7828–139
	22	**Flax Packing,** 3/8″x3/8″x2′ 3½″ for Ref. 3.	
	23	**Rivet,** 5/16″x1¾″ Rd. Hd. I. for attaching Link to Hasp.	
56545	**24**	**Terminal Connector** for No. 10 Wire	8064–350

PLATE L-1187½

UNION SWITCH & SIGNAL CO.



JUNCTION BOX

UNION SWITCH & SIGNAL CO.

JUNCTION BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
156120	**A**	**Junction Box** complete, with three Terminal Blocks "T," "U" and "V" (Without Foundation Bolts) fittings for 1½″ Conduit Outlet as shown (For Mounting on Concrete Foundation)	C–9180–10
156121	**Aa**	**Junction Box** complete, with three Terminal Blocks "T," "U" and "V" (Without Foundation Bolts) fittings for 1″ Conduit as per View "U"(For Mounting on Concrete Foundation)	C–9180–10
156122	**Ab**	**Junction Box** complete, with three terminal Blocks "T," "U" and "V" (Without Foundation Bolts) with 1″ Pipe Plug as per View "X" (For mounting on Concrete Foundation)	C–9180–10
156124	**Ac**	**Junction Box** complete, with one Terminal Block "U" (Without Foundation Bolts) with Cable Outlet as per View "Y" (For mounting on Concrete Foundation)	C–9180–10
160694	**Ad**	**Junction Box** complete, with three Terminal Blocks "T," "U" and "V" (Without Foundation Bolts) fittings for ¾″ Conduit as per View "W" (For mounting on Concrete Foundation)	C–9180–10
171209	**Ae**	**Junction Box** complete, with Two Terminal Blocks "U" and "V," and one Terminal Block as per View "Z" in space "T" (Without Foundation Bolts) fittings for 1½″ Conduit as shown (For mounting on Concrete Foundation)	C–9180–10
156123	**Af**	**Junction Box** complete, with Foundtaion Bolts, for mounting on Concrete Foundation (Orders should specify Box required referring to Refs. A to Ae)	C–9180–10
156125	**B**	**Junction Box** complete with Three Terminal Blocks "T," "U" and "V" and Fittings for 1½″ Conduit on one side of Box as shown, mounted on 3″ Pipe Post	C–9180–10

UNION SWITCH & SIGNAL CO.

JUNCTION BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

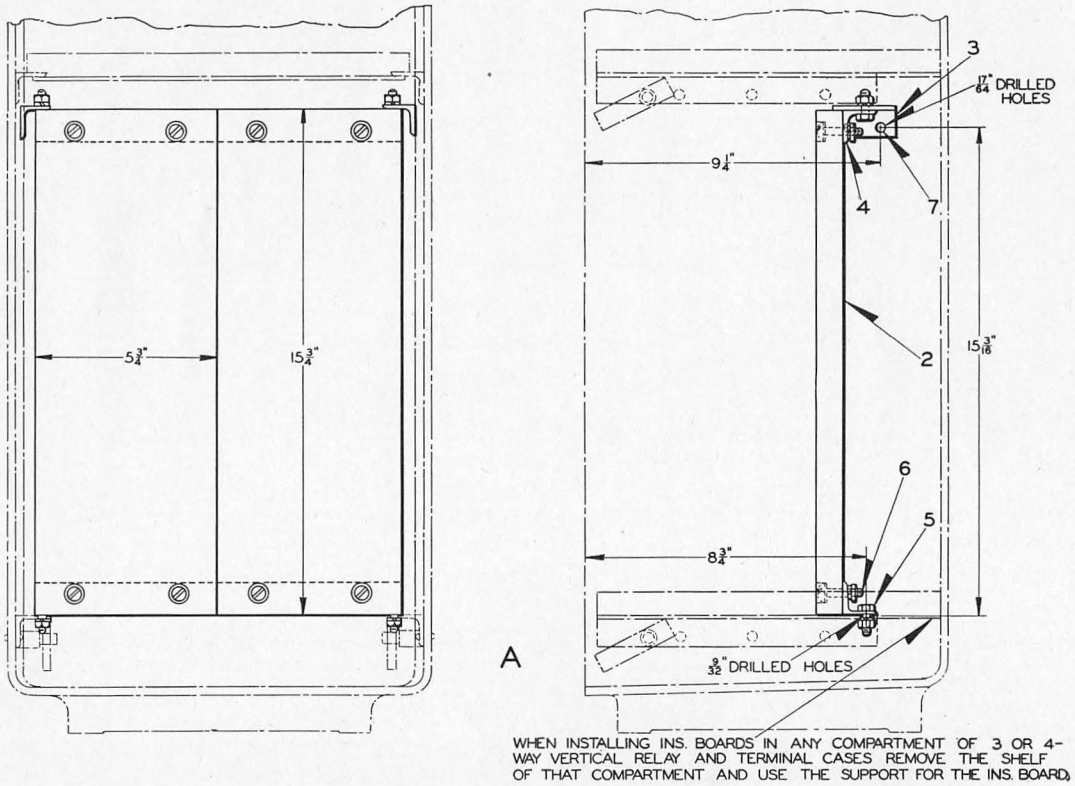
Piece	Ref.	Description	Drawing Reference
156126	**Ba**	**Junction Box** complete with Three Terminal Blocks "T," "U" and "V" and Fittings for 1″ Conduit per View "W" on one side of Box mounted on 3″ Pipe Post	C–9180–10
156127	**Bb**	**Junction Box** complete with one Terminal Block "U" and Fittings as per View "Y" mounted on 3″ Pipe Post	C–9180–10
167210	**Bc**	**Junction Box** complete with one Terminal Block "U" and Fittings as per View "X" (Without 3″ Pipe Post)	C–9180–10
144200	**2**	**Foundation Bolt, ½″x14″** for Ref. Af	7913–23
154826	**3**	**Box only,** for Refs. A, Aa, Ab, Ac and Ad	C–9181–18
171208	**4**	**Box only,** for Ref. Ae	C–9181–18
154994	**5**	**Box only,** for Refs. B, Ba and Bb	C–9181–21
167211	**6**	**Box only,** for Ref. Bc	C–9181–21
	7	**Cover** with Gasket Ref. 17 for Refs. A, Aa, Ab, Ac, Ad, Ae, Af, B, Ba, Bb and Bc	C–9181–17
154827	**7a**	**Cover only,** for Ref. 7	C–9181–17
114168	**8**	**Terminal Block** complete with Center Terminals	9968–629
132837	**9**	**Fuse Holding Terminal Block,** complete, for Ref. Ae	9968–713
	10	**Machine Screw No. 12-28x1″** Fil. Hd. S. (Cad. Pl.).	
	11	**Hex. Nut, ½″** (Cad. Pl.).	
7309	**12**	**Washer**	7826–12
114118	**13**	**Gasket,** used under Terminal Block	8078–1362
	14	**Straight Box Connector, 1½″** Galv.	

UNION SWITCH & SIGNAL CO.

JUNCTION BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	15	**Panel Box Adapter, 1½″** Galv.	
	16	**Lock Nut, 1½″** Galv.	
	17	**Flax Packing, ⅜″x⅜″x2′ 3½″** for Ref. 7.	
	18	**Pipe Reducing Bushing, 1½″x1″.**	
	19	**Straight Box Connector, 1″** Galv. (For 1″ Conduit).	
	20	**Shouldered Pipe Reducing Bushing, 1½″x1″** M. I. (for 1″ Conduit).	
	21	**Pipe Plug, 1″** C. I.	
149078	**22**	**Cable Outlet**.....	B–10342–54
	23	**Shouldered Pipe Reducing Bushing, 1½″x¾″** M. I. (For ¾″ Conduit).	
	24	**Straight Box Connector, ¾″** Galv. (For ¾″ Conduit).	
121356	**25**	**Gasket,** used under Refs. 9 and 30.....	8078–1372
	26	**Tap Bolt, ½″-13x3″** Sq. Hd. (Cad. Pl.) with ½″ Hex. Nut (Cad. Pl.) and Washer Ref. 12.	
145514	**27**	**Pipe 3″ Diam. 2′ 0″ long**.....	B–10925–2
	28	**Floor Flange, 3″** Galv. (Without Holes).	
	29	**Set Screw, ⅜″-16x¾″** Sq. Hd. Cup Pt. I. (Cad. Pl.).	
114160	**30**	**Terminal Block,** complete with End Terminals for Ref. Bc.....	9968–630



APPLICATION OF INSTRUMENT BOARD TO EXISTING CASES

UNION SWITCH & SIGNAL CO.

APPLICATION OF INSTRUMENT BOARD TO EXISTING TWO OR THREE WAY CASES

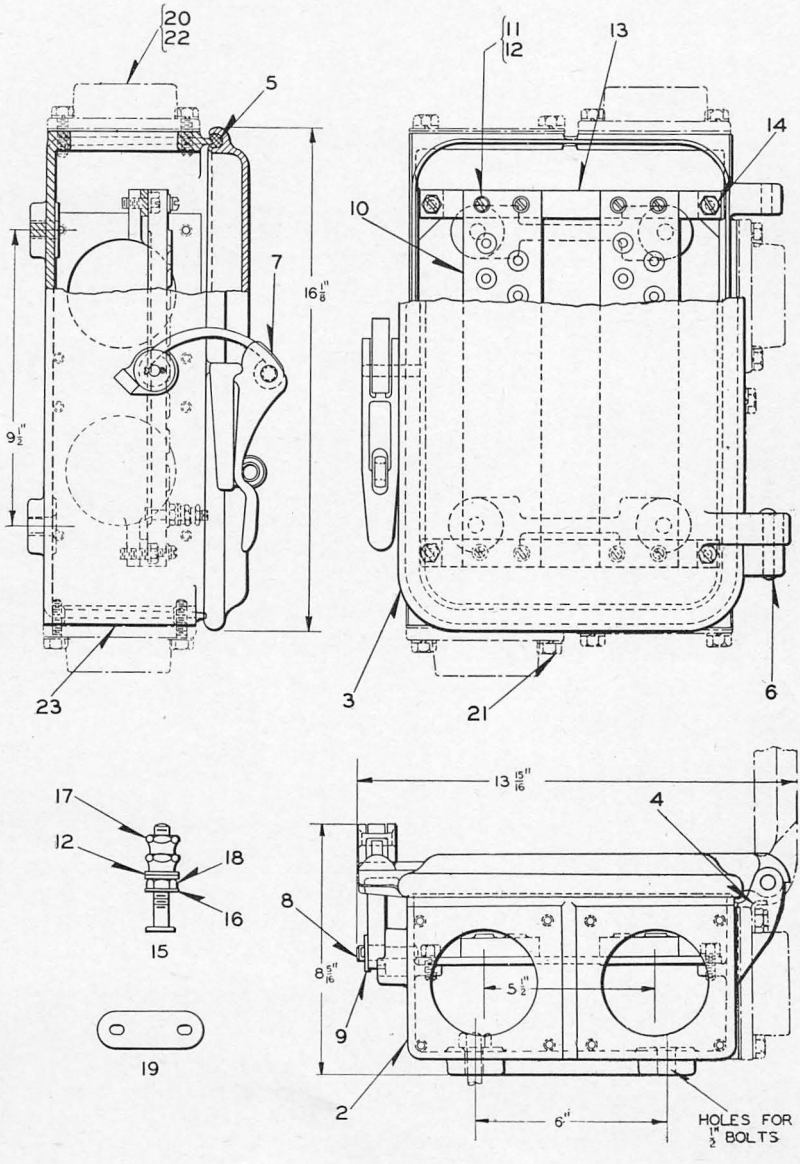
For application to Cases shown on Plates L-1178 and L-1179

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
164737	**A**	**Application of Instrument Board** to existing 2 or 3 way Cases (Inc. 2-2, 2-3, 2-4, 4-5, 8-6 and 4-7).....	C–7539–49
158044	**2**	**Instrument Board only**.....	12443–158
158164	**3**	**Support**.....	C–7539–37
158162	**4**	**Support**.....	C–7539–37
	5	**Tap Bolt, 1/4"x3/4"** with 1/4" Hex. Nut and 1/4" Plain S. Lock Washer (1/8"x1/16") Cad. Pl.	
	6	**Stove Bolt, 1/4"x1 1/4"** Rd. Hd. with Sq. Nut 3/16" Plate Washer and 1/4" Plain S. Lock Washer (1/8"x1/16") Cad. Pl.	
	7	**Rivet, 1/4"x5/8"** Rd. Hd. I.	

PLATE L-1210

UNION SWITCH & SIGNAL CO.



CABLE TERMINAL BOX

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
169570	A	**Cable Terminal Box** complete with two Terminal Boards (Capacity 34 Terminals) and conduit openings on both ends and one side of Box (Without Terminal Posts and Flanges)	C–6676–22
	Aa	**Cable Terminal Box** Ref. A, complete with two Terminal Boards, 34 Terminal Posts, and Flanges for 2″ Conduit	C–6676–22
	Ab	**Cable Terminal Box** Ref. A complete with two Terminal Boards, 34 Terminal Posts and Cover Plate Ref. 22, when no Conduit is used	C–6676–22
169018	2	**Box only**, for Ref. A	C–6677–21
169983	3	**Cover** with Staple and Flax Packing	C–6677–22
170115	4	**Clip**, used when Ref. 22 is required	10914–295
170114	4a	**Clip**, used when Ref. 20 is required	10914–295
	5	**Flax Packing**, ⅜″x⅜″x4′ 1″ for Ref. 3.	
50679	6	**Pin**, ⅜″x2½″ for attaching Cover to Box	B–10207–1
163359	7	**Hasp** complete with Spring	8299–116
163590	8	**Stud** with Washer and Cotter Pin ⅛″x¾″	8115–118
25054	9	**Washer** for Ref. 8	7826–1
164333	10	**Terminal Board only** (Without Terminal Posts)	B–10364–57
	11	**Machine Screw No. 14-24x1⅛″** Fil. Hd. Br. (N. P.) with Washer Ref. 12 and ¼″ Plain S. Lock Washer (⅛″x$\frac{1}{16}$″) Cad. Pl. for fastening Ref. 10 to Ref. 2.	
29102	12	**Washer**	7828–139
169701	13	**Strip**	9999–826

UNION SWITCH & SIGNAL CO.

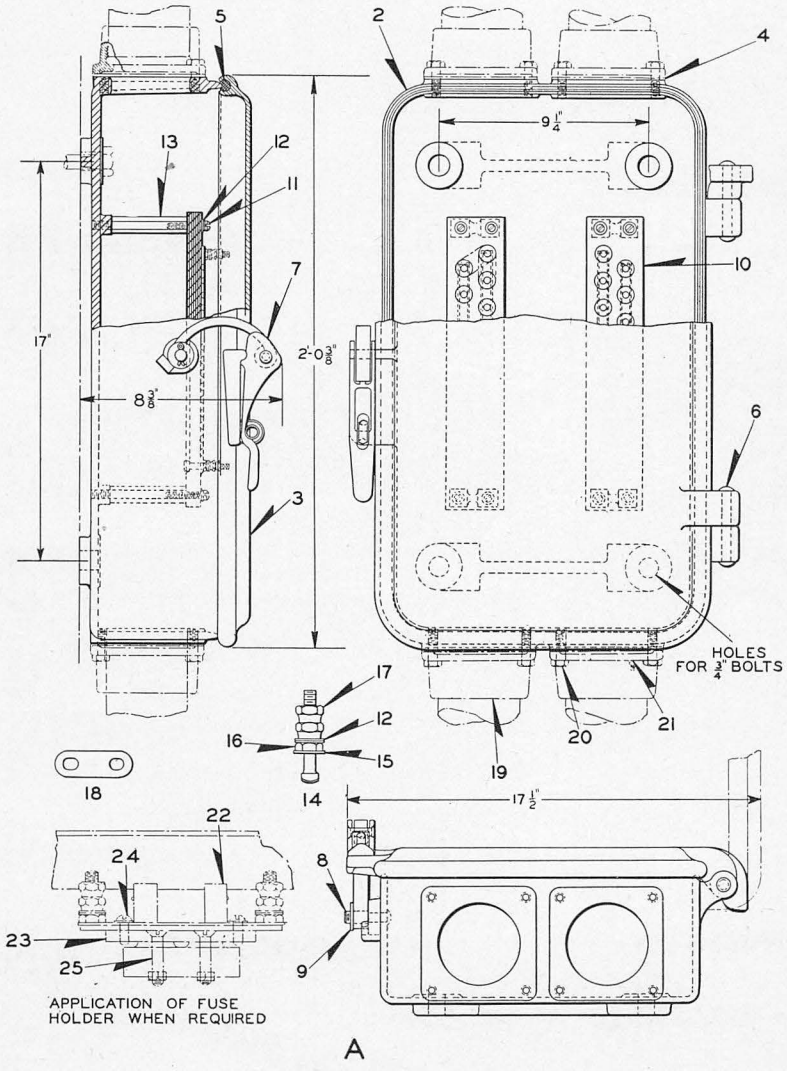
CABLE TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
170053	**14**	**Screw** with $\frac{5}{16}$″ Plain S. Lock Washer ($\frac{1}{8}$″x$\frac{1}{16}$″) Cad. Pl.	8190–312
	15	**Terminal Post** with Nuts and Washers (Inc. 1-15a, 2-12, 1-16, 2-17 and 1-18)	12451–
130593	**15a**	**Terminal Post only,** for Ref. 15	8094–1192
29104	**16**	**Washer**	7828–138
29101	**17**	**Nut**	8109–193
29103	**18**	**Nut**	8109–194
120343	**19**	**Connector**	8064–305
161946	**20**	**Flange** for 2″ Conduit	9681–25
	21	**Tap Bolt, $\frac{3}{8}$″-16x1″** Hex. Hd. for Ref. 20.	
	21a	**Tap Bolt, $\frac{3}{8}$″-16x$\frac{3}{4}$″** Hex. Hd. for Ref. 22.	
159049	**22**	**Cover Plate,** used when conduit is not required.	9999–681
159053	**23**	**Gasket,** for Refs. 20 and 22	8078–1477

PLATE L-1213

UNION SWITCH & SIGNAL CO.



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CABLE TERMINAL BOX

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
158397	**A**	**Cable Terminal Box** complete, with Two Terminal Boards, Capacity 38 Terminal Posts and arranged with Conduit Openings at both ends of Box (Without Terminal Posts and Flanges)	C–6676–17
	Aa	**Cable Terminal Box** Ref. A complete, with Two Terminal Boards, 38 Terminal Posts and Flanges for 2″ Pipe	C–6676–17
	Ab	**Cable Terminal Box** Ref. A complete, with Two Terminal Boards, 38 Terminal Posts and Flanges for 3″ Pipe	C–6676–17
	Ac	**Cable Terminal Box** Ref. A, complete, with Two Terminal Boards, 38 Terminal Posts and Flanges for 3½″ Pipe	C–6676–17
	Ad	**Cable Terminal Box** Ref. A complete, with Two Terminal Boards, 38 Terminal Posts and Cover Plates Ref. 21 when no conduit is used	C–6676–17
156137	**2**	**Box only,** for Ref. A	C–6677–13
157715	**3**	**Cover** with Hasp, Staple and Flax Packing	C–6677–14
159053	**4**	**Gasket** used with Refs. 19, 19a, 19b and 21	8078–1477
	5	**Flax Packing, ⅜″x⅜″x6′ 1½″** for Ref. 3.	
49634	**6**	**Pin, ⅜″x3⅜″** for attaching Ref. 3 to Ref. 2	B–10207–1
163359	**7**	**Hasp** complete with Spring	8299–116
163590	**8**	**Stud** with Cotter Pin, ⅛″x¾″ and Washer Ref. 9	8115–118
25054	**9**	**Washer** for Ref. 8	7826–1
164333	**10**	**Terminal Board** (Without Terminal Posts)	B–10364–57
	11	**Machine Screw No. 14-24x1⅜″** Fil. Hd. Br. (N. P.) with Washer Ref. 12 and ¼″ Plain S. Lock Washer (⅛″x$\frac{1}{16}$″) Cad. Pl.	

UNION SWITCH & SIGNAL CO.

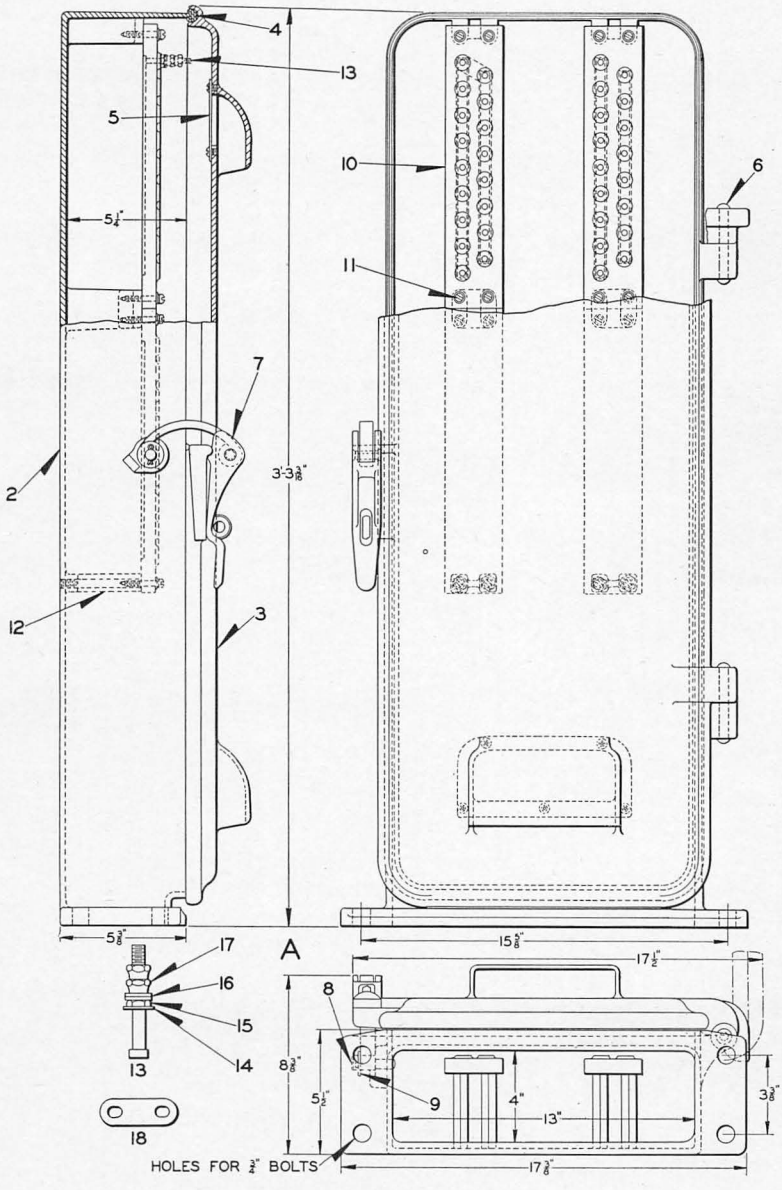
CABLE TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
29102	**12**	**Washer**	7828–139
166309	**13**	**Stud**	8071–111
	14	**Terminal Post** with Nuts and Washers (Inc. 1-14a, 2-12, 1-15, 1-16 and 2-17)	12451–
130593	**14a**	**Terminal Post only,** for Ref. 14	8094–1192
29104	**15**	**Washer**	7828–138
29103	**16**	**Nut**	8109–194
29101	**17**	**Nut**	8109–193
120343	**18**	**Connector**	8064–305
161946	**19**	**Flange** for 2″ Conduit	9681–25
161947	**19a**	**Flange** for 3″ Conduit	9681–26
162788	**19b**	**Flange** for 3½″ Conduit	9681–27
	20	**Tap Bolt, ⅜″-16x1″** Hex. Hd. for Refs. 19, 19a and 19b.	
	20a	**Tap Bolt, ⅜″-16x¾″** Hex. Hd. for Ref. 21.	
159049	**21**	**Cover Plate,** used when no conduit is required	9999–681
132836	**22**	**Fuse Holder** complete	8064–584
164350	**23**	**Insulation**	8750–2354
	24	**Machine Screw No. 12-28x½″** Rd. Hd. S. (Cad. Pl.) with Washer Ref. 24a.	
36073	**24a**	**Washer** for Ref. 24	7828–161
	25	**Machine Screw No. ¼″-20x1⅛″** Flat Hd. S. (Cad. Pl.) with Nut Ref. 25a.	
158972	**25a**	**Nut** for Ref. 25	8265–232–

PLATE L-1216

UNION SWITCH & SIGNAL CO.



CABLE TERMINAL BOX

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
167338	**A**	**Cable Terminal Box** complete, with door (with Door Stops), Four Terminal Boards capacity 68 Terminal Posts (Without Terminal Posts) Box arranged with Conduit opening at one end	C–6676–21
167337	**2**	**Box only**	C–6677–20
158448	**3**	**Door** with Cover Stop, Ventilators, Staple and Flax Packing	C–6677–16
	4	**Flax Packing, 3/8″x3/8″x8′ 3½″** for Ref. 3.	
32530	**5**	**Screen Holder**	B–7318–5
5730	**5a**	**Screen**	B–7318–2
	5b	**Machine Screw, No. 14-24x3/8″** Rd. Hd. S. (Cad. Pl.) for Refs. 5 and 5a.	
49634	**6**	**Pin, 3/8″x3 3/8″** for attaching Door to Case	B–10207–1
163359	**7**	**Hasp** complete with Spring	8299–116
163590	**8**	**Stud** with 1/8″x3/4″ S. Cotter and Washer Ref. 9	8115–118
25054	**9**	**Washer** for Ref. 8	7826–1
164333	**10**	**Terminal Board, 17 Way** (Without Terminal Posts)	B–10364–57
	11	**Machine Screw, No. 14-24x1 3/8″** Fil. Hd. Br. (N. P.) with Washer Ref. 16 and 1/4″ Pl. S. Lock Washer (1/8″x1/16″) (Cad. Pl.).	
166309	**12**	**Stud**	8071–111
	13	**Terminal Post** complete with Nuts and Washers (Inc. 1-13a, 1-14, 1-15, 2-16 and 2-17)	12451–
130593	**13a**	**Terminal Post only,** for Ref. 13	8094–1192

PLATE L-1216

UNION SWITCH & SIGNAL CO.

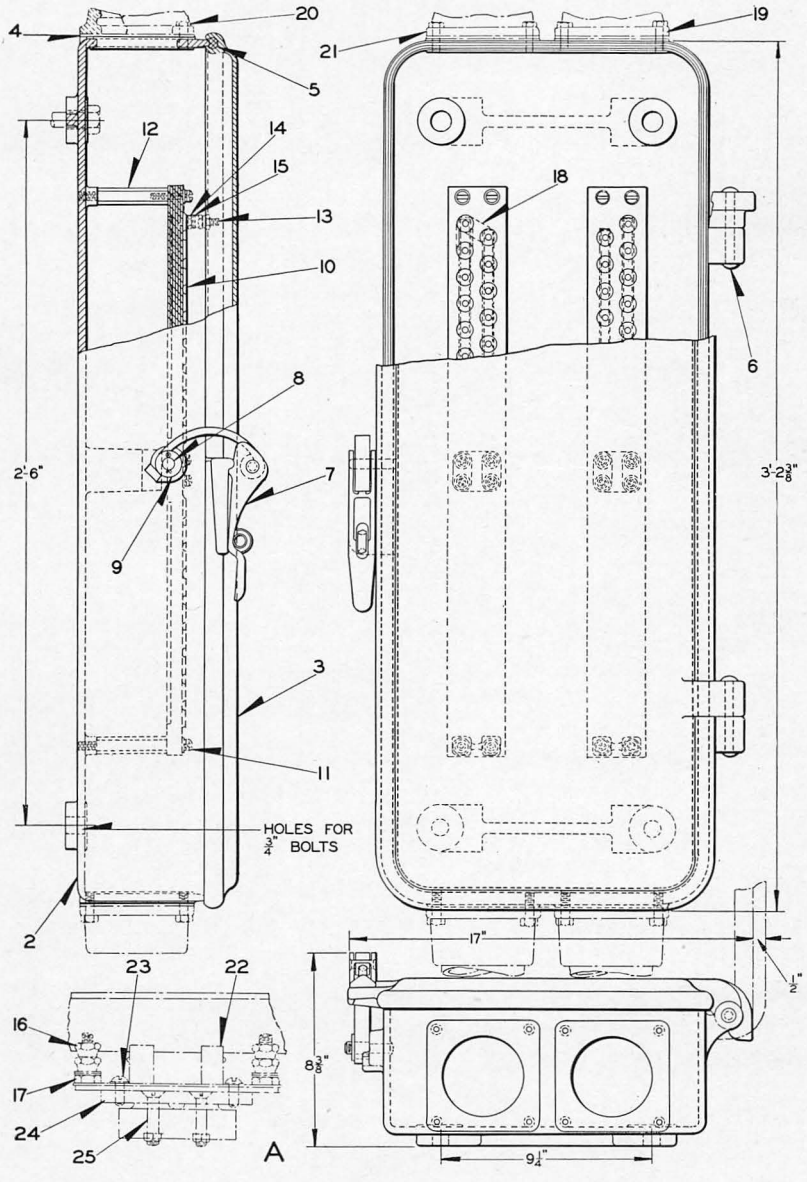
CABLE TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
29104	**14**	**Washer**	7828–138
29103	**15**	**Nut**	8109–194
29102	**16**	**Washer**	7828–139
29101	**17**	**Nut**	8109–193
120343	**18**	**Connector**	8064–305

PLATE L-1219

UNION SWITCH & SIGNAL CO.



CABLE TERMINAL BOX

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
158806	**A**	**Cable Terminal Box** complete with Four Terminal Boards, Capacity 76 Terminal Posts; and with Conduit openings at both ends of Box (without Terminal Posts and Flanges)	C–6676–14
	Aa	**Cable Terminal Box** Ref. A complete with Four Terminal Boards, 76 Terminal Posts and flanges for 2″ Conduit	C–6676–14
	Ab	**Cable Terminal Box** Ref. A complete with Four Terminal Boards, 76 Terminal Posts and flanges for 3″ Conduit	C–6676–14
	Ac	**Cable Terminal Box** Ref. A complete with Four Terminal Boards, 76 Terminal Posts and flanges for 3½″ Conduit	C–6676–14
	Ad	**Cable Terminal Box** Ref. A complete with Four Terminal Boards, 76 Terminal Posts and Cover Plates Ref. 21 when no Conduit is used	C–6676–14
158446	**2**	**Box only,** for Ref. A	C–6677–15
162599	**3**	**Cover** with Staple and Flax Packing	C–6677–16
159053	**4**	**Gasket** used with Refs. 19, 19a, 19b and 21	8078–1477
	5	**Flax Packing, ⅜″x⅜″x8′ 3½″** for Ref. 3.	
49634	**6**	**Pin, ⅜″x3⅜″** for attaching Ref. 3 to Ref. 2	B–10207–1
163359	**7**	**Hasp** complete with Spring	8299–116
163590	**8**	**Stud** with Washer Ref. 9 and Cotter Pin ⅛″x¾″	8115–118
25054	**9**	**Washer** for Ref. 8	7826–1
164333	**10**	**Terminal Board** (without Terminal Posts)	B–10364–57
	11	**Machine Screw No. 14-24x1⅜″** Fil. Hd. Br. (N. P.) with Washer Ref. 15 and ¼″ Plain S. Lock Washer (⅛″x$\frac{1}{16}$″) (Cad. Pl.).	

PLATE L-1219

UNION SWITCH & SIGNAL CO.

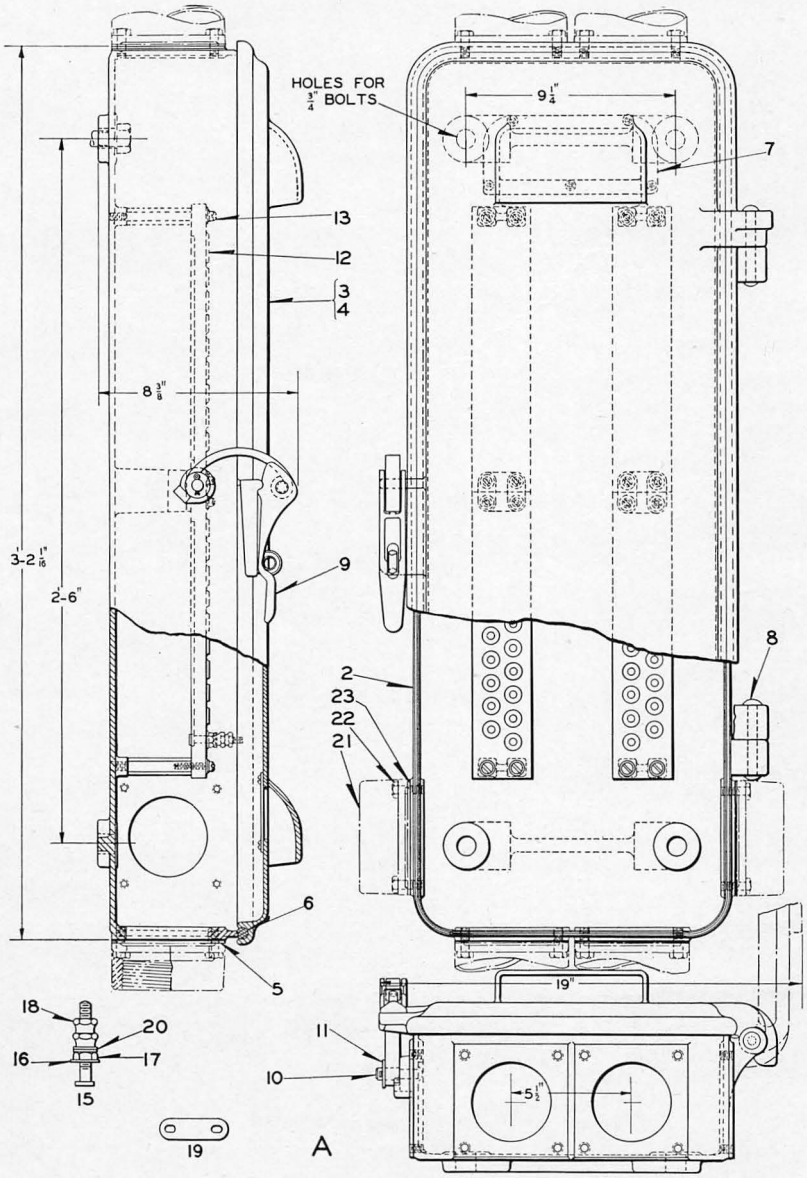
CABLE TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
166309	**12**	**Stud**	8071–111
	13	**Terminal Post** with Nuts and Washers (Inc. 1-13a, 1-14, 2-15, 2-16 and 1-17)	12451–
130593	**13a**	**Terminal Post only,** for Ref. 13	8094–1192
29104	**14**	**Washer**	7828–138
29102	**15**	**Washer**	7828–139
29101	**16**	**Nut**	8109–193
29103	**17**	**Nut**	8109–194
120343	**18**	**Connector**	8064–305
161946	**19**	**Flange** for 2″ Conduit	9681–25
161947	**19a**	**Flange** for 3″ Conduit	9681–26
162788	**19b**	**Flange** for 3½″ Conduit	9681–27
	20	**Tap Bolt, ⅜″-16x1″** Hex. Hd. for Refs. 19, 19a and 19b	
	20a	**Tap Bolt, ⅜″-16x¾″** Hex. Hd. for Ref. 21.	
159049	**21**	**Cover Plate,** used when Conduit is not required	9999–681
132836	**22**	**Fuse Holder** complete	8064–584
	23	**Machine Screw No. 12-28x½″** Rd. Hd. S. (Cad. Pl.) with Washer Ref. 23a.	
36073	**23a**	**Washer** for Ref. 23	7828–161
164350	**24**	**Insulation**	8750–2354
	25	**Machine Screw, ¼″-20x1⅛″** Flat Hd. S. (Cad. Pl.) with Nut Ref. 25a.	
158972	**25a**	**Nut** for Ref. 25	8265–232

PLATE L-1222

UNION SWITCH & SIGNAL CO.



CABLE TERMINAL BOX

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
159001	**A**	**Cable Terminal Box** complete, with cover (with Cover Stops), Four Terminal Boards capacity 76 Terminal Posts, and arranged with Two Conduit openings at both ends and one on each side of box (Without Terminal Posts and Flanges)	C–6676–19
159326	**Aa**	**Cable Terminal Box** complete, with cover (Without Cover Stops), Four Terminal Boards capacity 76 Terminal Posts and arranged with Two Conduit openings at both ends and one on each side of Box (Without Terminal Posts and Flanges)	C–6676–19
	Ab	**Cable Terminal Box** Ref. A complete, with Four Terminal Boards, 76 Terminal Posts and 2″ Conduit 22° Angle Flange	C–6676–19
	Ac	**Cable Terminal Box** Ref. Aa complete, with Four Terminal Boards, 76 Terminal Posts and 2″ Conduit 22° Angle Flange	C–6676–19
	Ad	**Cable Terminal Box** Ref. A complete, with Four Terminal Boards, 76 Terminal Posts and Flange for 2″ Conduit	C–6676–19
	Ae	**Cable Terminal Box** Ref. Aa complete, with Four Terminal Boards, 76 Terminal Posts and Flange for 2″ Conduit	C–6676–19
	Af	**Cable Terminal Box** Ref. A complete, with Four Terminal Boards, 76 Terminal Posts and Flange for 3″ Conduit	C–6676–19
	Ag	**Cable Terminal Box** Ref. Aa complete, with Four Terminal Boards, 76 Terminal Posts and Flange for 3″ Conduit	C–6676–19
	Ah	**Cable Terminal Box** Ref. A complete, with Four Terminal Boards, 76 Terminal Posts and Flange for 3½″ Conduit	C–6676–19

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	Aj	**Cable Terminal Box** Ref. Aa, complete, with Four Terminal Boards, 76 Terminal Posts and Flange for 3½″ Conduit	C–6676–19
159077	**2**	**Box only,** for Refs. A and Aa	C–6677–17
158448	**3**	**Cover** with Cover Stop, Ventilators, Staple and Flax Packing for Ref. A	C–6677–16
159070	**4**	**Cover** without Cover Stop, with Ventilators, Staple and Flax Packing, for Ref. Aa	C–6677–16
159053	**5**	**Gasket** for Refs. 21, 21a, 21b, 21c and 23	8078–1477
	6	**Flax Packing, ⅜″x⅜″x8′ 3½″** for Refs. 3 and 4.	
32530	**7**	**Screen Holder**	B–7318–5
5730	**7a**	**Screen**	B–7318–2
	7b	**Machine Screw No. 14-24x⅜″** Rd. Hd. S. (Cad. Pl.) for Refs. 7 and 7a.	
49634	**8**	**Pin, ⅜″x3⅜″** for attaching Door to Case	B–10207–1
163359	**9**	**Hasp** complete with Spring	8299–116
163590	**10**	**Stud** with Cotter, ⅛″x¾″ and Washer Ref. 11	8115–118
25054	**11**	**Washer,** for Ref. 10	7826–1
158025	**12**	**Terminal Board** (without Terminal Posts)	B–10364–52
	13	**Machine Screw No. 14-24x1⅜″** Fil. Hd. Br. (N. P.) with Washer Ref. 20 and ¼″ Plain S. Lock Washer (⅛″x$\frac{1}{16}$″) (Cad. Pl.	
166309	**14**	**Stud**	8071–111
	15	**Terminal Post** with Nuts and Washers (Inc. 1-15a, 1-16, 1-17, 2-18 and 2-20)	12451–

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
130593	**15a**	**Terminal Post only**, for Ref. 15	8094–1192
29104	**16**	**Washer**	7828–138
29103	**17**	**Nut**	8109–194
29101	**18**	**Nut**	8109–193
163682	**19**	**Connector**	8064–693
29102	**20**	**Washer**	7828–139
163306	**21**	**Flange** for 2″ Conduit 22° Angle Flange	9681–28
161946	**21a**	**Flange** for 2″ Conduit	9681–25
161947	**21b**	**Flange** for 3″ Conduit	9681–26
162788	**21c**	**Flange** for 3½″ Conduit	9681–27
	22	**Tap Bolt, ⅜″-16x1″** Hex. Hd. for Refs. 21, 21a, 21b and 21c.	
	22a	**Tap Bolt, ⅜″-16x¾″** Hex. Hd. for Ref. 23.	
159049	**23**	**Cover Plate**, used when no conduit is required	9999–681

Section
L

Plates L-1250, L-1255, L-1260, L-1275, L-1285 and L-1295

HOUSINGS

Junction and Terminal Boxes

Union Switch & Signal Co.
Swissvale, Pa.

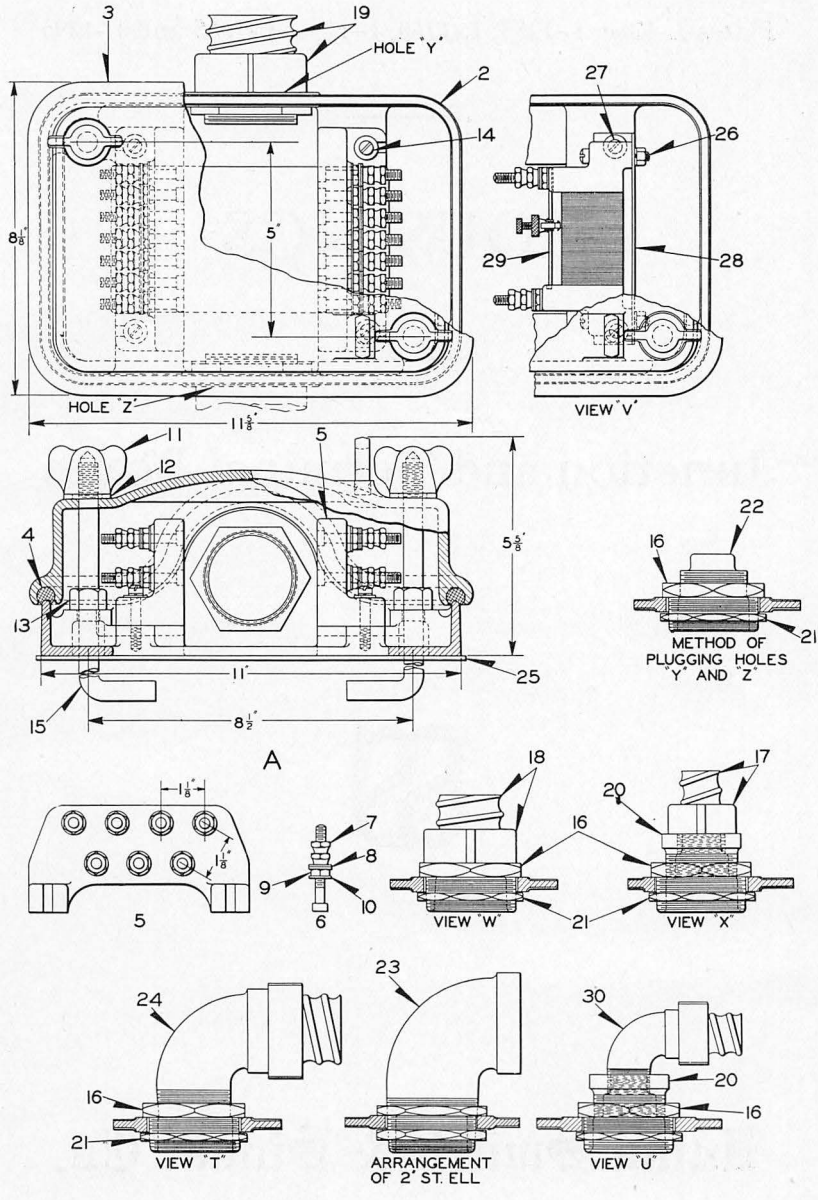
December; 1932

Printed in U.S.A.

Remove Staple Before Filing Pages in Loose Leaf Cover

PLATE L-1250

UNION SWITCH & SIGNAL CO.



7 AND 14-WAY JUNCTION BOXES

UNION SWITCH & SIGNAL CO.

7 AND 14-WAY JUNCTION BOXES

If combinations other than those listed below are required orders should refer to the nearest equivalent reference and specify the combination desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
152100	**A**	**7 or 14-Way Junction Box** with Foundation Bolts and Gasket. (Orders should specify Box desired by referring to Refs. Aa to An).....	C–9180–6

14-Way Junction Box with Wing Nuts and ½″ Hex. Nuts (Without Foundation Bolts and Gasket) (With 2 Terminal Boards) (With 3¾″ x 7¼″ Opening in Base for Wires).

Piece	Ref.	Box Ref.	Hole "Y"		Hole "Z"		Remarks
			Box Connector Ref.	Bushing Ref.	Box Connector Ref.	Bushing Ref.	
155257	**Aa**	2	19 (2″)	None	19 (2″)	None	As shown
155256	**Ab**	2a	19 (2″)	None	None	None	
155259	**Ac**	2	18 (1½″)	16	18 (1½″)	16	Per View "W"
155258	**Ad**	2a	18 (1½″)	16	None	None	Per View "W"
157356	**Ae**	2	17 (¾″)	16 & 20	18 (1½″)	16	With ¾″ and 1½″ Galv. 90° Street Ells, per Views "T" and "U"

7-Way Junction Box with Wing Nuts and ½″ Hex. Nuts (Without Foundation Bolts and Gasket) (With 1 Terminal Board) (With 3¾″ x 7¼″ Opening in Base for Wires)

171477	**Af**	2	18 (1½″)	16	18 (1½″)	16	Per View "W"
155263	**Ag**	2a	18 (1½″)	16	None	None	Per View "W"

UNION SWITCH & SIGNAL CO.

7 AND 14-WAY JUNCTION BOXES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Box Ref.	Hole "Y"		Hole "Z"		Remarks
			Box Connector Ref.	Bushing Ref.	Box Connector Ref.	Bushing Ref.	
172173	***Ah**	2a	18 (1½″)	16	None	None	Per View "W" and 12-Ohm Resistor, per View "V"
174109	***Aj**	2a	18 (1½″)	16	None	None	Per View "W" and 4.5-Ohm Resistor, per View "V"
176927	**Ak**	2	17 (¾″)	16 & 20	17 (¾″)	16 & 20	Per View "X"
	Am	2a	17 (¾″)	16 & 20	None	None	Per View "X"
163059	**An**	2	17 (¾″)	16 & 20	18 (1½″)	16	With ¾″ and 1½″ Galv. 90° Street Ells, per Views "T" and "U"

*NOTE: If Resistance Units of different resistances than those listed are desired, orders should so state.

Piece	Ref.	Description	Drawing Reference
152018	**2**	**Box** with 2½″ Cored Holes "Y" and "Z"	C–9181–11
152017	**2a**	**Box** with 2½″ Cored Hole "Y"	C–9181–11
177091	**2b**	**Box** without Holes "Y" and "Z"	C–9181–11
	3	**Cover** with Gasket Ref. 4	C–9181–12
	4	**Gasket,** ⅜″x⅜″x3′-3½″ Square woven Flax Packing	

UNION SWITCH & SIGNAL CO.

7 AND 14-WAY JUNCTION BOXES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
152097	**5**	**Terminal Board with Terminal Posts** (Inc. 1-5a and 7-6)	9968–881
152096	**5a**	**Terminal Board Only**	9968–880
177280	**6**	**Terminal Post** with Nuts and Washers (Inc. 1-6a, 2-7, 2-8, 1-9 and 1-10)	12451–243
130593	**6a**	**Terminal Post Only**	8094–1192
29101	**7**	**Nut**	8109–193
29102	**8**	**Washer**	7828–139
29103	**9**	**Hex. Nut**	8109–194
29104	**10**	**Washer**	7828–138
176297	**11**	**Wing Nut Complete** with Gasket Ref. 12	8331–72
175008	**12**	**Rubber Washer** for Ref. 11 (For boxes furnished since 2/23/31)	8078–1407
7309	**12a**	**Steel Washer** for Ref. 11 (For boxes furnished prior to 2/23/31)	7826–12
	13	**Hex. Nut,** ½″ (Cad. Pl.)	
	14	**Machine Screw, No. 14-24x1¼″** Fil. Hd. S. (Cad. Pl.) with ¼″ Plain S. Lock Washer (⅛″x$\frac{1}{16}$″) Cad. Pl. and Washer Ref. 10.	
144200	**15**	**Foundation Bolt,** ½″x14″	7913–23
144357	**16**	**Pipe Reducing Bushing,** 2″ to 1½″, with Lock Nut Ref. 21	9663–14
	17	**Jake Straight Box Connector,** ¾″ M. I. Galv. for ¾″ D. S. Flexible Steel Conduit.	

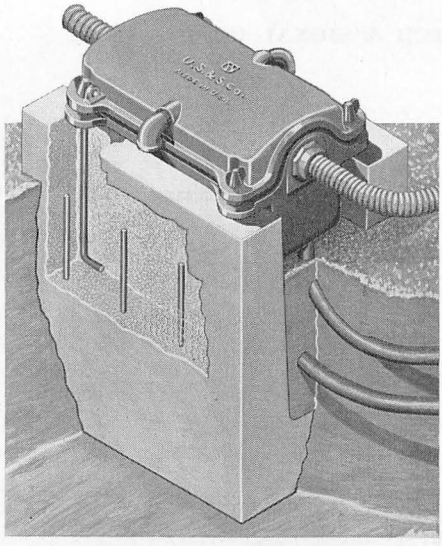
UNION SWITCH & SIGNAL CO.

7 AND 14-WAY JUNCTION BOXES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	17a	**Jake Straight Box Connector,** 1″ M. I. Galv. for 1″ D. S. Flexible Steel Conduit.	
	18	**Jake Straight Box Connector,** 1½″ M. I. Galv. for 1½″ D. S. Flexible Steel Conduit.	
	19	**Jake Straight Box Connector,** 2″ M. I. Galv. for 2″ D. S. Flexible Steel Conduit.	
	20	**Pipe Reducing Bushing,** 1½″ to ¾″ M. I. Galv.	
	20a	**Pipe Reducing Bushing,** 1½″ to 1″ M. I. Galv.	
	21	**Lock Nut,** 2″ Galv. Steel.	
	22	**Pipe Plug,** 1½″ Std.	
	23	2″ M. I. Galv. 90° Street Ell with Two Lock Nuts.	
	24	1½″ M. I. Galv. 90° Street Ell.	
	24a	1″ M. I. Galv. 90° Street Ell.	
178893	**25**	**Gasket** (For preventing Condensation).....	8078–1539
	26	**Machine Screw, No. 14-24x1½″** Fil. Hd. S. (Cad. Pl.) with ¼″ Pl. S. Lock Washer (⅛″x$\frac{1}{16}$″) (Cad. Pl.) and Nut Ref. 26a.	
93420	**26a**	**Nut** for Ref. 26.....	8265–128
	27	**Machine Screw, No. 14-24x½″** Fil. Hd. S. (Cad. Pl.) with ¼″ Pl. S. Lock Washer (⅛″x$\frac{1}{16}$″) (Cad. Pl.)	
172172	**28**	**Bracket**.....	10914–331
156684	**29**	**Resistor,** 12-Ohms (Ref. Fc, Plate F-6504).....	9065–199
156683	**29a**	**Resistor,** 4.5-Ohms (Ref. Fb, Plate F-6504).....	9065–199
	30	¾″ M. I. Galv. 90° Street Ell.	

Remove staple before filing Plates in proper sequence in loose leaf covers



Style "W" Junction Boxes

See following page for ordering references for complete assemblies and details.

Style "W" Junction Boxes have general application to all types of signal installations where conductor cables are to be terminated. They have special application at locations where prevalent climatic conditions may cause abnormal accumulation of moisture in boxes, due to condensation.

Condensation is minimized in the Style "W" line of boxes by sealing the cables in the lower chamber and by making provision for air circulation underneath. Two elbow type ventilators equipped with fine mesh screens are used to equalize the temperatures inside and outside the boxes.

Other Features:

Knockouts are cast in the bottom and only the number required for the cables being run need be opened.

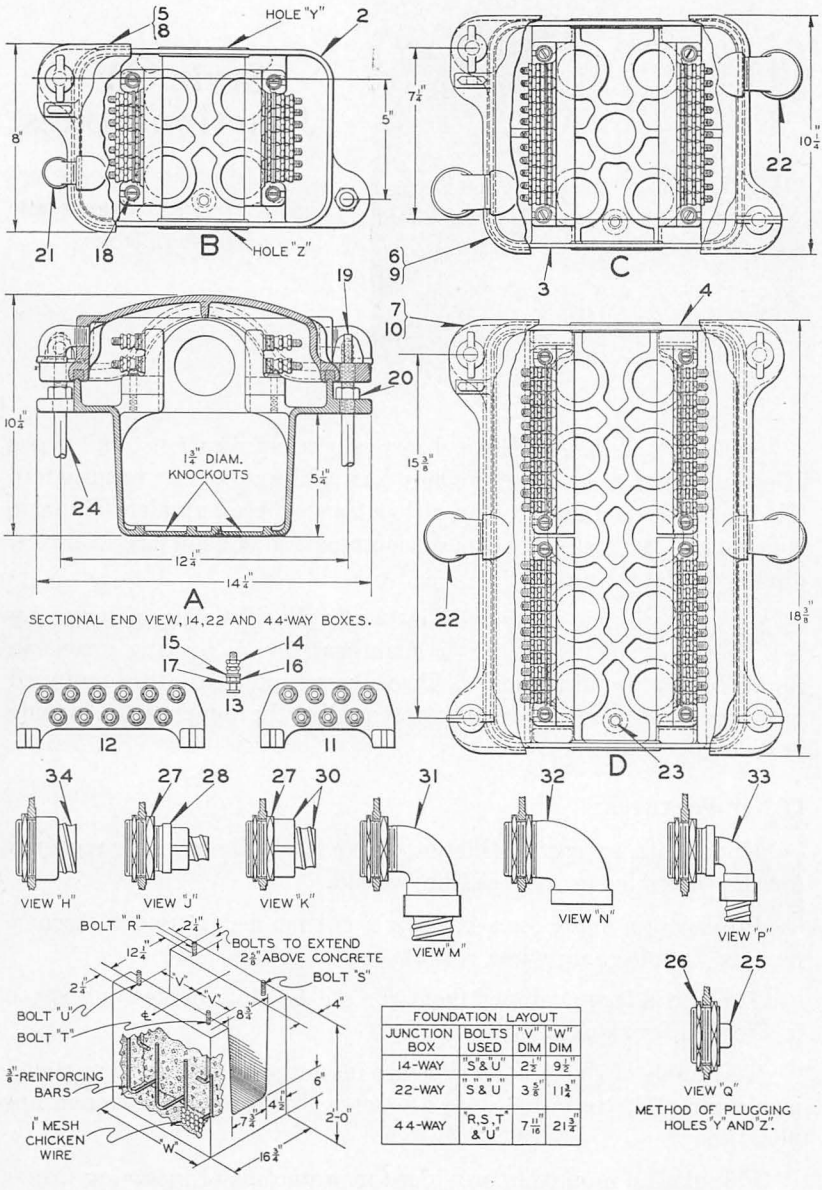
Provision is made for a variety of fittings being used to accommodate the outgoing wires.

There is a large compartment for pot-heading cables and space is afforded for slack in wires.

Terminals of the A.A.R. type are mounted in boards of moulded insulation. The terminal nuts are accessible for socket wrench application.

Foundation mounting provides for protection of incoming cables and no sharp bends in these are necessary.

UNION SWITCH & SIGNAL CO.



FOUNDATION LAYOUT			
JUNCTION BOX	BOLTS USED	"V" DIM	"W" DIM
14-WAY	"S" & "U"	2½"	9½"
22-WAY	" " " "	3⅝"	11¾"
44-WAY	"R", "S", "T" & "U"	7 11/16"	21¾"

STYLE "W" 14, 22 AND 44-WAY JUNCTION BOXES

UNION SWITCH & SIGNAL CO.

STYLE "W" 14, 22 AND 44-WAY JUNCTION BOXES

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	A	**Style "W" 14, 22 or 44-Way Junction Box Complete** with Foundation Bolts. (Orders should specify Box desired by referring to Refs. B to Bc for 14-Way Box, Refs. C to Cc for 22-Way Box or Refs. D to Dc for 44-Way Box)	C–9180–

Style "W" 14-Way Junction Box with Wing Nuts and ½″ Hex. Nuts (Without Foundation Bolts). Dwg. C-9180-19.

Piece	Ref.	Box Ref.	R. H. Side		L. H. Side		Remarks
			Hole "Y"	Conduit Fittings	Hole "Z"	Conduit Fittings	
185693	**B**	2	With	None	With	None	As shown
190549	**Ba**	2	With	For 1½″ Conduit	With	For 1½″ Conduit	Per View "K"
190550	**Bb**	2	With	For 1½″ Conduit	With	Using 2″ Pipe Plug	Per Views "K" and "Q"
	Bc	2a	Without		Without		

UNION SWITCH & SIGNAL CO.

STYLE "W" 14, 22 AND 44-WAY JUNCTION BOXES

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Style "W" 22-Way Junction Box with Wing Nuts and ½" Hex. Nuts (Without Foundation Bolts). Dwg. C-9180-29.

Piece	Ref.	Box Ref.	R. H. Side		L. H. Side		Remarks
			Hole "Y"	Conduit Fittings	Hole "Z"	Conduit Fittings	
	C	3	With	None	With	None	As shown
	Ca	3	With	For 1½" Conduit	With	For 1½" Conduit	Per View "K"
	Cb	3	With	For 1½" Conduit	With	Using 2" Pipe Plug	Per Views "K" and "Q"
194101	Cc	3a	Without		Without		

Style "W" 44-Way Junction Box with Wing Nuts and ½" Hex. Nuts (Without Foundation Bolts). Dwg. C-9180-26.

Piece	Ref.	Box Ref.	R. H. Side		L. H. Side		Remarks
			Hole "Y"	Conduit Fittings	Hole "Z"	Conduit Fittings	
185692	D	4a	Without	None	Without	None	
190546	Da	4a	Without	None	Without	None	With 3 Terminal Boards
190547	Db	4a	Without	None	Without	None	With 2 Terminal Boards
190548	Dc	4	With	None	With	For 2" Conduit	With 2 Terminal Boards, Per View "H"

Piece	Ref.	Description	Drawing Reference
185668	2	**Box** with 2½" Cored Holes "Y" and "Z"	C–9181–33
185803	2a	**Box** without Holes "Y" and "Z"	C–9181–33

UNION SWITCH & SIGNAL CO.

STYLE "W" 14, 22 AND 44-WAY JUNCTION BOXES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	3	**Box** with 2½" Cored Holes "Y" and "Z"	C–9181–41
194098	3a	**Box** without Holes "Y" and "Z"	C–9181–41
185802	4	**Box** with 2½" Cored Holes "Y" and "Z"	C–9181–24
185629	4a	**Box** without Holes "Y" and "Z"	C–9181–24
	5	**Cover Complete** with Gasket Ref. 8	C–9181–33
	6	**Cover Complete** with Gasket Ref. 9	C–9181–41
	7	**Cover Complete** with Gasket Ref. 10	C–9181–32
	8	**Gasket,** ⅜"x⅜"x3'-4¼" Sq. Woven Flax Packing.	
	9	**Gasket,** ⅜"x⅜"x3'-8¾" Sq. Woven Flax Packing.	
	10	**Gasket,** ⅜"x⅜"x5'-1" Sq. Woven Flax Packing.	
152097	11	**Terminal Board Complete** with Terminal Posts (Inc. 1-11a and 7-13)	9968–881
152096	11a	**Terminal Board Only,** for Ref. 11	9968–880
154759	12	**Terminal Board Complete** with Terminal Posts. (Inc. 1-12a and 11-13)	9968–906
154699	12a	**Terminal Board Only,** for Ref. 12	9968–904
	13	**Terminal Post Complete** with Nuts and Washers (Inc. 1-13a, 2-14, 2-15, 1-16 and 1-17)	12451–243
130593	13a	**Terminal Post Only**	8094–1192
29101	14	**Nut**	8109–193
29102	15	**Washer**	7828–139

UNION SWITCH & SIGNAL CO.

STYLE "W" 14, 22 AND 44-WAY JUNCTION BOXES

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
29103	**16**	**Hex. Nut**	8109–194
29104	**17**	**Washer**	7828–138
	18	**Machine Screw,** No. 14-24x1¼″ Fil. Hd. S. (Cad. Pl.) with ¼″ Pl. S. Lock Washer (⅛″x$\frac{1}{16}$″) (Cad. Pl.) and Washer Ref. 17.	
186687	**19**	**Wing Nut**	8331–72
	20	½″ **Hex. Nut** (Cad. Pl.).	
70109	**21**	**Ventilator** (½″ Galv. Street Ell)	7318–57
185702	**22**	**Ventilator** (1″ Galv. Street Ell)	7318–82
	23	**Pipe Plug,** ¼″ Std. C. I. (Cad. Pl.).	
163300	**24**	**Foundation Bolt** ½″x14″	7913–23
	25	**Pipe Plug,** 2″ Std.	
	26	**Lock Nut,** 2″ Galv. Steel.	
144357	**27**	**Pipe Reducing Bushing,** 2″ to 1½″, with Lock Nut Ref. 26	9663–14
	28	**Pipe Reducing Bushing,** 1½″ to ¾″ M. I. Galv.	
	28a	**Pipe Reducing Bushing,** 1½″ to 1″ M. I. Galv.	
	29	**Jake Straight Box Connector,** ¾″ M. I. Galv. for ¾″ S. S. Flexible Steel Conduit.	
	29a	**Jake Straight Box Connector,** 1″ M. I. Galv. for 1″ S. S. Flexible Steel Conduit.	
	30	**Jake Straight Box Connector,** 1½″ M. I. Galv. for 1½″ S. S. Flexible Steel Conduit.	

UNION SWITCH & SIGNAL CO.

STYLE "W" 14, 22 AND 44-WAY JUNCTION BOXES

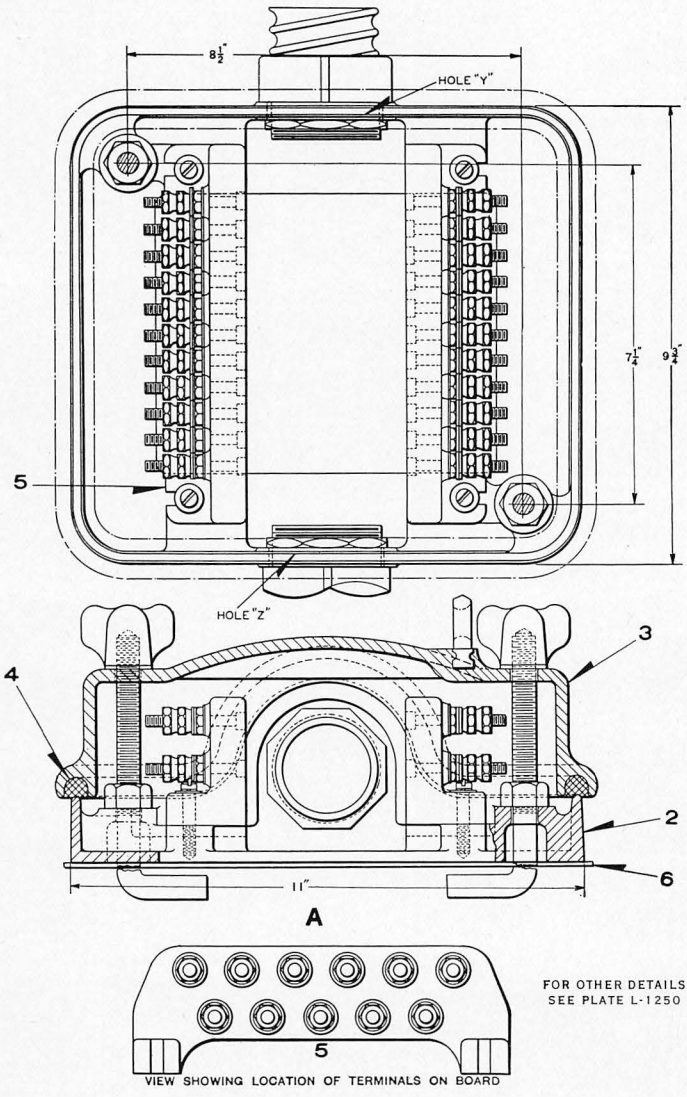
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	31	**Street Ell,** 1½″ M. I. Galv. 90° Complete with Jake Straight Box Connector Ref. 30.	
	31a	**Street Ell,** 1½″ M. I. Galv. 90°.	
	31b	**Street Ell,** 1″ M. I. Galv. 90° complete with Jake Straight Box Connector Ref. 29a.	
	31c	**Street Ell,** 1″ M. I. Galv. 90°.	
	32	**Street Ell,** 2″ M. I. Galv. 90° complete with Two Lock Nuts.....	
	33	**Street Ell,** ¾″ M. I. Galv. 90° complete with Jake Straight Box Connector Ref. 29.	
	33a	**Street Ell,** ¾″ M. I. Galv. 90°.	
	34	**Jake Straight Box Connector,** 2″ M. I. Galv. for 2″ S. S. Flexible Steel Conduit.	

PLATE L-1255

UNION SWITCH & SIGNAL CO.



FOR OTHER DETAILS
SEE PLATE L-1250

22-WAY JUNCTION BOXES

UNION SWITCH & SIGNAL CO.

22-WAY JUNCTION BOXES

If combinations other than those listed below are required orders should refer to the nearest equivalent reference and specify the combination desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
155053	**A**	**22-Way Junction Box with Foundation Bolts and Gasket** (Orders should specify Box desired by referring to Refs. Aa to Ae)	C–9180–11
		22-Way Junction Box with Wing Nuts and ½″ Hex. Nuts (Without Foundation Bolts and Gasket) (With 6″x7¼″ Opening in Base for Wires)	

			Hole "Y"		Hole "Z"		
Piece	Ref.	Box Ref.	Box Connector Ref. Pl. L-1250	Bushing Ref. Pl. L-1250	Box Connector Ref. Pl. L-1250	Bushing Ref. Pl. L-1250	Remarks
155056	**Aa**	2a	19 (2″)	None	None	None	
155057	**Ab**	2	19 (2″)	None	19 (2″)	None	As shown
155058	**Ac**	2a	18 (1½″)	16	None	None	Per View "W" Plate L-1250
155059	**Ad**	2	18 (1½″)	16	18 (1½″)	16	Per View "W" Plate L-1250
163060	**Ae**	2	17 (¾″)	16 & 20	18 (1½″)	16	With ¾″ and 1½″ Galv. 90° Street Ells, per Views "T" and "U," Plate L-1250

UNION SWITCH & SIGNAL CO.

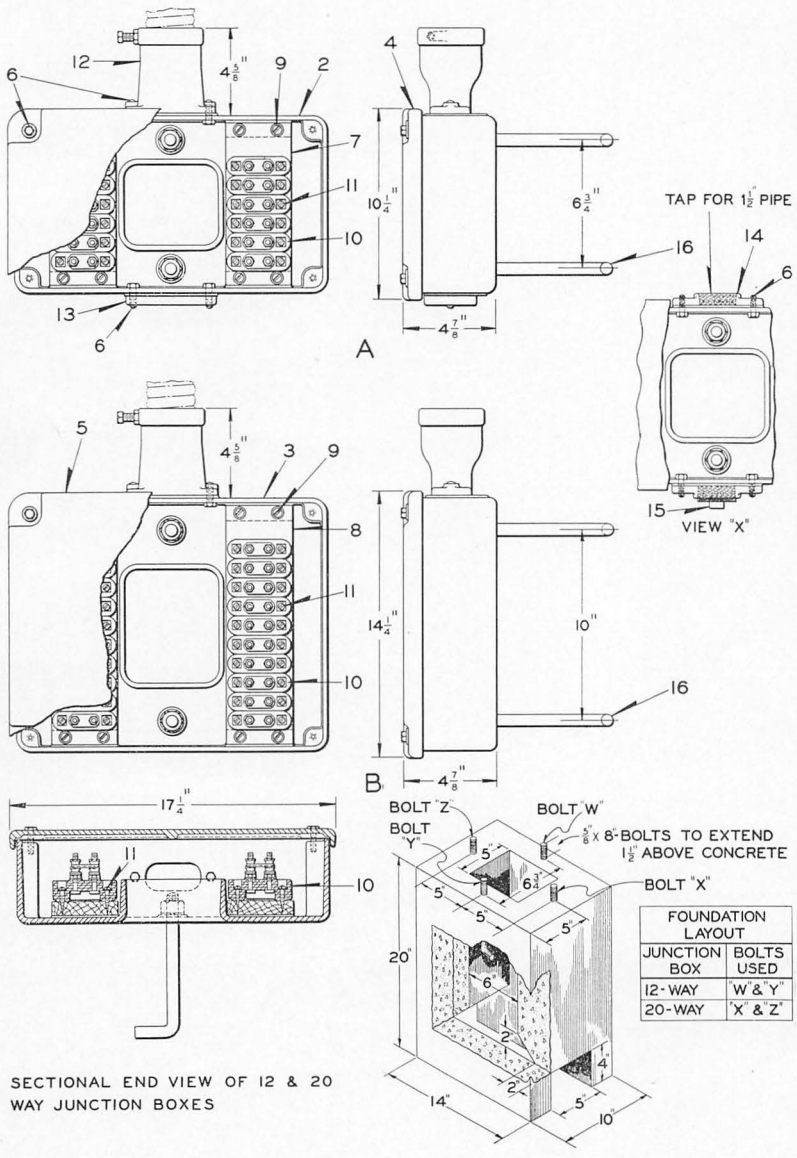
22-WAY JUNCTION BOXES
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
154727	**2**	**Box** with 2½″ Cored Holes "Y" and "Z"	C–9181–15
154726	**2a**	**Box** with 2½″ Cored Hole "Y"	C–9181–15
177112	**2b**	**Box** without Holes "Y" and "Z"	C–9181–15
	3	**Cover Complete** with Gasket Ref. 4	C–9181–16
	4	**Gasket,** ⅜″x⅜″x3′-8″ Square Woven Flax Packing	
154759	**5**	**Terminal Board Complete** with eleven Terminal Posts (For Spacing of Terminal Posts, see Plate L-1250)	9968–906
154699	**5a**	**Terminal Board Only,** for Ref. 5	9968–904
178894	**6**	**Gasket** (For preventing condensation)	8078–1540
		For all other details, refer to Plate L-1250.	

PLATE L-1257

UNION SWITCH & SIGNAL CO.



FOUNDATION LAYOUT	
JUNCTION BOX	BOLTS USED
12-WAY	"W" & "Y"
20-WAY	"X" & "Z"

STYLE "N" 12 AND 20-WAY JUNCTION BOXES

UNION SWITCH & SIGNAL CO.

STYLE "N" 12 AND 20-WAY JUNCTION BOXES

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
190054	**A**	**Style "N" 12-Way Junction Box Complete** with foundation bolts (orders should specify Box desired by referring to Refs. Aa and Ab)	C–9180–25
190041	**Aa**	**Style "N" 12-Way Junction Box Complete** arranged for 2″ Flexible Conduit as shown (without foundation bolts)	C–9180–25
190042	**Ab**	**Style "N" 12-Way Junction Box Complete** arranged for 1½″ pipe connection as per view "X" (without foundation bolts)	C–9180–25
190053	**B**	**Style "N" 20-Way Junction Box Complete** with foundation bolts (orders should specify Box desired by referring to Refs. Ba and Bb)	C–9180–24
190040	**Ba**	**Style "N" 20-Way Junction Box Complete** arranged for 2″ Flexible Conduit as shown (without foundation bolts)	C–9180–24
	Bb	**Style "N" 20-Way Junction Box Complete** arranged for 1½″ pipe connection as per view "X" (without foundation bolts)	C–9180–24
190047	**2**	**Box Only,** for Refs. Aa and Ab	C–9181–37
190043	**3**	**Box Only,** for Refs. Ba and Bb	C–9181–35
190046	**4**	**Cover,** for Refs. Aa and Ab	C–9181–36
190044	**5**	**Cover,** for Refs. Ba and Bb	C–9181–36
	6	**Tap Bolt** ⅜″-16x1″ Hex. Hd. S. (Cad. Pl.) (Double thickness).	
190051	**7**	**Terminal Block Support** for 12-Way Box	12443–367
190050	**8**	**Terminal Block Support** for 20-Way Box	12443–366

UNION SWITCH & SIGNAL CO.

STYLE "N" 12 AND 20-WAY JUNCTION BOXES

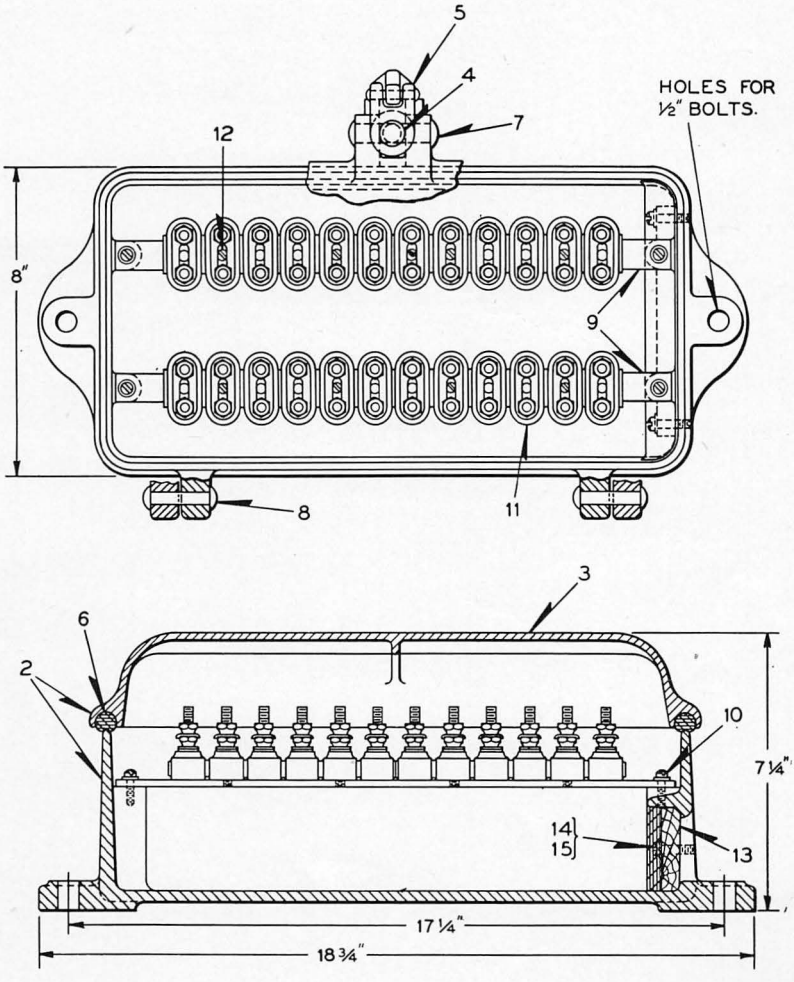
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	9	**Machine Screw** $\frac{5}{16}$"-18x1$\frac{1}{4}$" Fil. Hd. S. with $\frac{1}{4}$" S. Plate Washer and $\frac{5}{16}$" Plain S. Lock Washer ($\frac{5}{32}$"x$\frac{1}{16}$") (Cad. Pl.) (Double Thickness).	
114167	10	**Terminal Block (Porcelain) Complete** with Jumper, Nuts and Washers	9968–629
	11	**Wood Screw** No. 10x1$\frac{1}{4}$" Rd. Hd. S. (Cad. Pl.) with Washer Ref. 11a for attaching Terminal Block Ref. 10 to Supports Refs. 7 and 8.	
73129	11a	**Washer Only** for Ref. 11	7826–180
190052	12	**Cable Outlet** with Set Screw and Nut for 2" Flexible Conduit	B–10342–80
190049	13	**Cover Plate**	C–9181–37
190048	14	**Conduit Adapter** for 1$\frac{1}{2}$" Pipe Connection	C–9181–37
	15	**Pipe Plug** 1$\frac{1}{2}$" C. I. (Black).	
2505	16	**Foundation Bolt** $\frac{5}{8}$"x15$\frac{1}{2}$" with $\frac{5}{8}$" Plain S. Lock Washer ($\frac{7}{32}$"x$\frac{1}{8}$") and $\frac{5}{8}$" Hex. Nut with Tap .005" larger than min. P. D. (Cad. Pl. double thickness).	7913–29

PLATE L-1260

UNION SWITCH & SIGNAL CO.



A

24-WAY TERMINAL BOX

UNION SWITCH & SIGNAL CO.

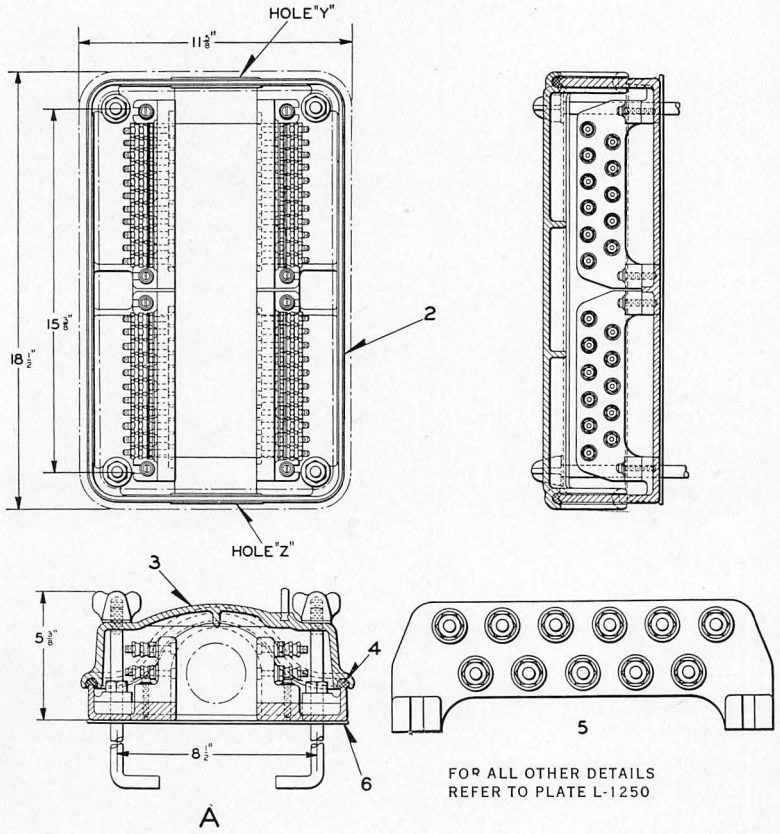
24-WAY TERMINAL BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
185188	**A**	**24-Way Terminal Box Complete** as shown with four Multiple Unit Terminal Blocks, Ref. 11	C–7540–7
148157	**2**	**Box Complete** with Cover, Eye Bolt and Hasp (Without Terminal Boards and Blocks)	C–7540–7
53801	**2a**	**Box Only,** for Ref. 2, with 1¾″x4⅞″ opening in one end for wires	C–8614–1
	3	**Cover Complete** with Gasket Ref. 6	C–8614–1
157	**4**	**Eye Bolt**	8034–10
68932	**5**	**Hasp**	9925–1
	6	**Gasket,** ⅜″x⅜″x3′-8⅜″ Square Woven Flax Packing.	
	7	**Rivet,** ½″x2½″ Rd. Hd. I.	
	8	**Rivet,** ⅜″x2″ Rd. Hd. I.	
185187	**9**	**Terminal Supporting Bar**	9999–1076
	10	**Machine Screw, No. 10-30x⅝″** Fil. Hd. S. (Cad. Pl.) with No. 10 Pl. S. Lock Washer (⅛″x$\frac{3}{64}$″) Cad. Pl.	
178389	**11**	**Multiple Unit Bakelite Terminal Block** (6-Way) Complete with Terminal Posts, Nuts, Washers and Connectors (For details see Ref. 3, Plate P-7300)	9968–1075
	12	**Machine Screw, No. 10-30x⅝″** Rd. Hd. S. (Cad. Pl.)	
53672	**13**	**Terminal Board**	9968–407
	14	**Machine Screw, No. 10-30x1″** Fil. Hd. S. (Cad. Pl.) with Washer Ref. 15.	
73493	**15**	**Washer**	7826–78

PLATE L-1275

UNION SWITCH & SIGNAL CO.



33 AND 44-WAY JUNCTION BOXES

UNION SWITCH & SIGNAL CO.

33 AND 44-WAY JUNCTION BOXES

If combinations other than those listed below are required orders should refer to the nearest equivalent reference and specify the combination desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

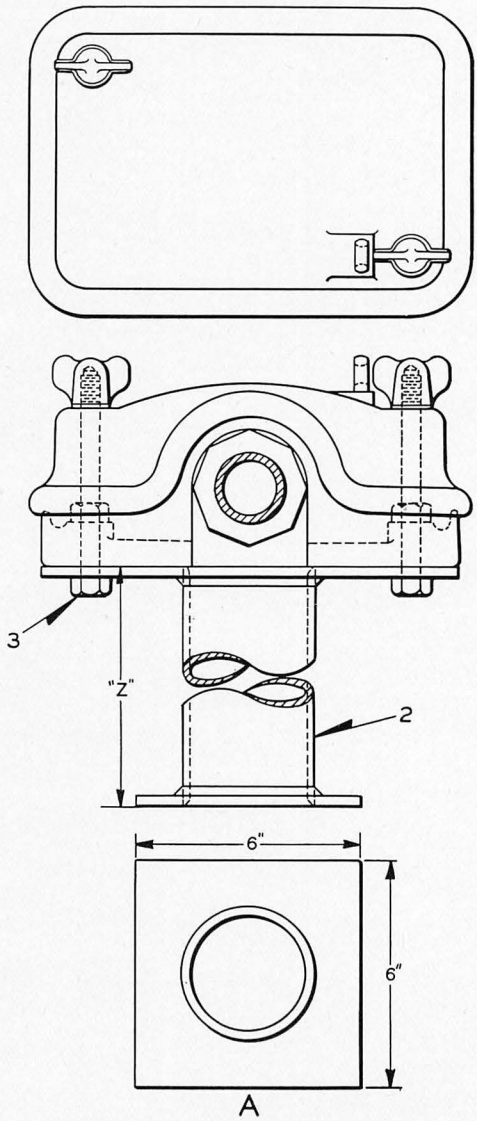
Piece	Ref.	Description	Drawing Reference
177051	**A**	**33 or 44-Way Junction Box with Foundation Bolts and Gasket** (Orders should specify Box desired by referring to Refs. Aa, Ab and Ac)	C–9180–17
		33 or 44-Way Junction Box with Wing Nuts and ½″ Hex. Nuts (Without Foundation Bolts and Gasket) (With 7¼″x14⅛″ opening in base for wires).	

Piece	Ref.	Box Ref.	Hole "Y"	Conduit Fittings	Hole "Z"	Conduit Fittings	Remarks
177049	**Aa**	**2**	Without	Without	Without	Without	44-Way with 4 Term. Boards
180019	**Ab**	**2a**	2½″ Cored Hole	Without	2½″ Cored Hole	Without	44-Way with 4 Term. Boards
177050	**Ac**	**2**	Without	Without	Without	Without	33-Way with 3 Term. Boards

Piece	Ref.	Description	Drawing Reference
177048	**2**	**Box** without Holes "Y" and "Z"	C–9181–23
180018	**2a**	**Box** with 2½″ Cored Holes "Y" and "Z"	C–9181–23
	3	**Cover Complete** with Gasket Ref. 4	C–9181–22
	4	**Gasket,** ⅜″x⅜″x5′-1″ Square Woven Flax Packing	
154759	**5**	**Terminal Board** with eleven Terminal Posts (For Spacing of Terminal Posts, see Plate L-1250)	9968–906
154699	**5a**	**Terminal Board Only**	9968–904
178895	**6**	**Gasket** (For preventing Condensation)	8078–1541
		NOTE: For all other details and conduit fittings, refer to Plate L-1250.	

PLATE L-1285

UNION SWITCH & SIGNAL CO.



14 AND 22-WAY JUNCTION BOXES MOUNTED ON
3" PIPE PEDESTAL

UNION SWITCH & SIGNAL CO.

14 AND 22-WAY JUNCTION BOXES MOUNTED ON 3″ PIPE PEDESTAL

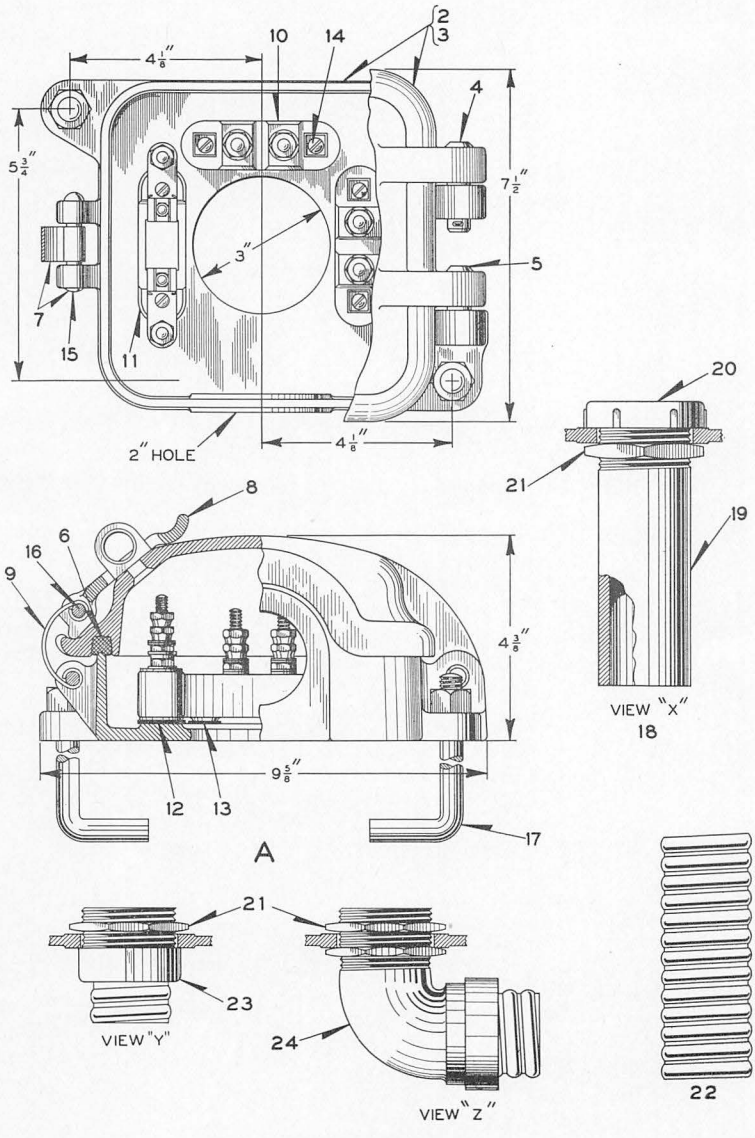
Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

.....**Way Junction Box Complete,** mounted on 3″ Pipe Pedestal (Specify references for junction box and pedestal required).						
Piece	Ref.	Pedestal		Junction Box	Remarks	Drawing Reference
		Ref.	"Z" Dim.			
	A	**2**	2′-0″	Ref. Ac, Plate L-1250	14-Way	C–9180–14
	Aa	**2a**	2′-6″	Ref. Ac, Plate L-1250	14-Way	C–9180–14
171869	**Ab**	**2b**	2′-6″	Ref. Ab, Plate L-1255	22-Way	C–9180–14

Piece	Ref.	Description	Drawing Reference
160079	2	**Pedestal (3″ Pipe)**, "Z" Dim., 2′-0″ long, with Top and Bottom Plates, for Ref. A.....	C–9181–26
160548	2a	**Pedestal (3″ Pipe)**, "Z" Dim. 2′-6″ long, with Top and Bottom Plates, for Ref. Aa.....	C–9181–26
171867	2b	**Pedestal (3″ Pipe)**, "Z" Dim. 2′-6″ long, with Top and Bottom Plates, for Ref. Ab.....	C–9181–26
	3	**Tap Bolt,** ½″-13x5″ Hex. Hd. (Cad. Pl.)	

PLATE L-1290

UNION SWITCH & SIGNAL CO.



JUNCTION BOX

UNION SWITCH & SIGNAL CO.

JUNCTION BOX

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

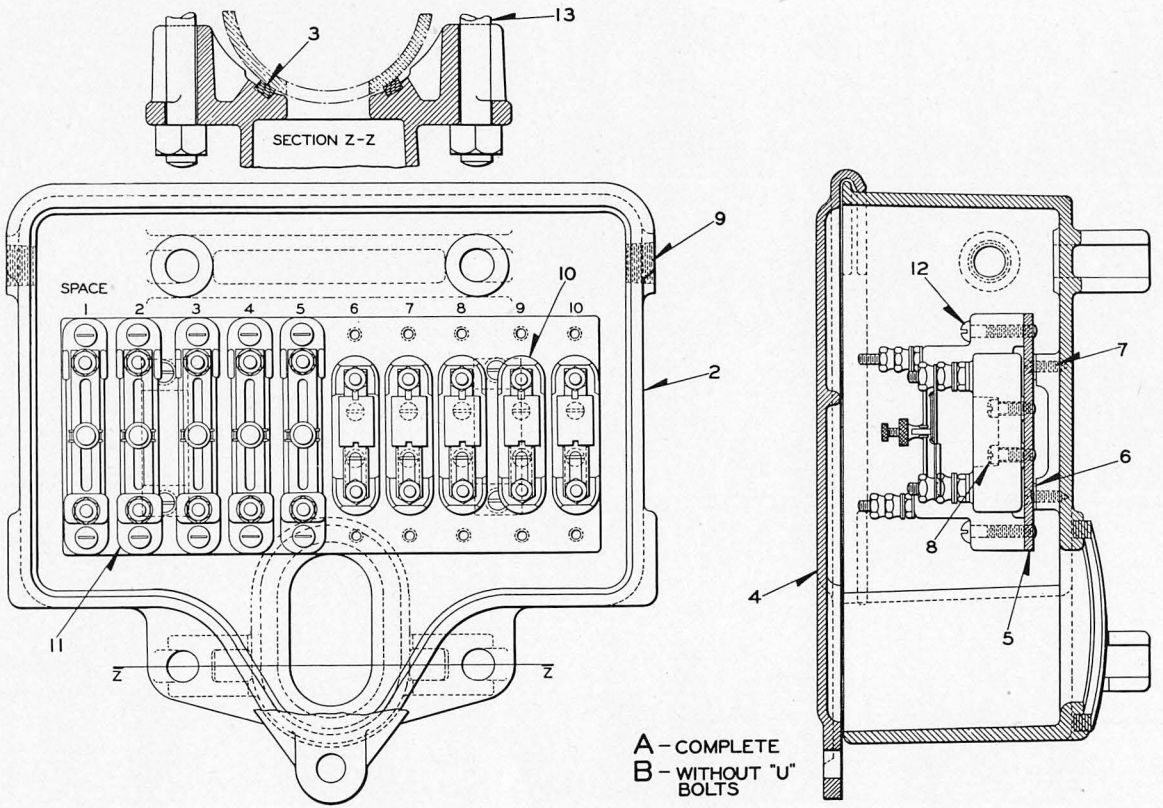
Piece	Ref.	Description	Drawing Reference
194850	**A**	**Junction Box Complete** with Foundation Bolts (Orders should specify Junction Box desired by referring to Refs. Aa to Ad)	C–9180–31
	Aa	**Junction Box Complete** (without Foundation Bolts) with Two Terminal Blocks and One Fuse holder, and with 1½″x5″ Galv. Conduit as per view "X"	C–9180–31
	Ab	**Junction Box Complete** (without Foundation Bolts) with Two Terminal Blocks and One Fuse holder, and with fittings for 1½″ S. S. Conduit as per view "Y"	C–9180–31
	Ac	**Junction Box Complete** (without Foundation Bolts) with Two Terminal Blocks and One Fuse holder, and with fittings for 1½″ S. S. Conduit as per view "Z"	C–9180–31
194213	**Ad**	**Junction Box Complete** (without Foundation Bolts and Conduit Fittings) with Two Terminal Blocks and One Fuse holder	C–9180–31
194980	**2**	**Box Complete** with Cover, Studs and Flax Packing (Inc. 1-2a, 1-3, 1-4, 1-5 and 1-6)	C–9181–44
194842	**2a**	**Box Only,** for Ref. 2	C–9181–44
	3	**Cover Complete** with Staple and Gasket	C–9181–45
	4	**Stud** with ⅛″x¾″ S. Cotter	8115–230
184580	**4a**	**Stud Only,** for Ref. 4	8115–230
184581	**5**	**Stud**	8115–230
	6	**Gasket,** ⅜″x⅜″x2′ 3½″ Sq. Woven Flax Packing for Ref. 3.	
	7	**Hasp Complete** with Hasp Link and Rivets (Inc. 1-8, 1-9, 1-15 and 1-16)	9925–

UNION SWITCH & SIGNAL CO.

JUNCTION BOX
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
145283	8	**Hasp**	8299–98
83939	9	**Hasp Link**	11031–5
114168	10	**Terminal Block Complete** (When ordering refer to Ref. 8, Plate L-1187½)	9968–629
132837	11	**Fuse Holding Terminal Block Complete** (When ordering refer to Ref. 9, Plate L-1187½)	9968–713
121356	12	**Gasket**	8078–1372
114118	13	**Gasket**	8078–1362
	14	**Machine Screw** No. 12-28x1″ Fil. Hd. S. (Cad. Pl.)	
	15	**Rivet** $\frac{5}{16}$″x2¼″ Rd. Hd. I.	
	16	**Rivet** $\frac{5}{16}$″x1¾″ Rd. Hd. I.	
	17	**Foundation Bolt** ½″x14″ with ½″ Hex. Nut	7913–23
2500	17a	**Foundation Bolt ½″x14″ Only,** for Ref. 17	7913–23
	18	**1½″x5″ Galv. Conduit** (Threaded on one end only) with Bushing Ref. 20 and Lock Nut Ref. 21 (If other than 5″ length is desired orders should so specify).	
	19	**1½″ x 5″ Galv. Conduit** (Threaded on one end only) (If other than 5″ length is desired orders should so specify).	
	20	**1½″ Bushing** for Ref. 18.	
	21	**1½″ Lock Nut** (Galv.).	
	22	**1½″ S. S. Conduit** (1.5″ I.D.x1.975″ O.D.) orders should specify length desired.	
	23	**Jake Straight Box Connector,** 1½″ M. I. Galv. for 1½″ S. S. Flexible Steel Conduit.	
	24	**1½″ M. I. Galv. 90°** Street Ell.	



CABLE TERMINAL BOX FOR APPLYING TO
3½", 4" OR 5" PIPE

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX FOR APPLYING TO 3½", 4" OR 5" PIPE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
177617	**A**	**Cable Terminal Box Complete** with 5 Terminal Blocks, Ref. 10 or 10a, 5 Resistors Ref. 11 or 11a, and "U" Bolts Ref. 13, 13a or 13b (Orders should specify the references for terminal blocks, resistors and "U" bolts desired)	C–6676–24
177616	**B**	**Cable Terminal Box Complete** with 5 Terminal Blocks, Ref. 10, in Spaces 6, 7, 8, 9 and 10 (Without Resistance Units and U-Bolts)	C–6676–24
179618	**Ba**	**Cable Terminal Box Complete** with 6 Terminal Blocks, Ref. 10, in Spaces 5, 6, 7, 8, 9 and 10 (Without Resistance Units and U-Bolts)	C–6676–24
178259	**Bb**	**Cable Terminal Box Complete** with 10 Terminal Blocks, Ref. 10 (Without Resistance Units and U-Bolts)	C–6676–24
178331	**Bc**	**Cable Terminal Box Complete** with 10 Terminal Blocks, Ref. 10a (Without Resistance Units and U-Bolts)	C–6676–24
172549	**Bd**	**Cable Terminal Box Complete** (Without Terminal Blocks, Resistance Units and U-Bolts)	C–6676–24
	2	**Terminal Box** with Gasket Ref. 3 (With 1¾"x3¼" Opening for Wires)	C–6677–24
52794	**3**	**Gasket** for Ref. 2	8078–924
172543	**4**	**Cover**	C–6677–24
172541	**5**	**Terminal Base** (drilled for both Terminal Blocks and Resistors)	9999–852
	6	**Plate Washer,** $\frac{3}{16}$" Steel (Cad. Pl.)	
	7	**Machine Screw, No. 14-24x½"** Flat Hd. S. (Cad. Pl.) for attaching Terminal Base to Box.	

UNION SWITCH & SIGNAL CO.

CABLE TERMINAL BOX FOR APPLYING TO 3½", 4" OR 5" PIPE (Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	8	**Machine Screw, No. 14-24x¾"** Fil. Hd. S. (Cad. Pl.) for attaching Terminal Blocks and Fixed Resistance Units to Terminal Base.	
	9	**Pipe Plug,** ½" C. I.	
114159	10	**Terminal Block Complete** with Terminal Connector and Marker (For details refer to Plate P-7290)...	9968-630
114163	10a	**Terminal Block Complete** with Terminal Connector, Without Marker (For details refer to Plate P-7290)	9968-630
	11	**Variable Resistance Unit** (When ordering refer to Ref. F, Plate F-6504)	9065-199
	11a	**Fixed Resistance Unit** (When ordering, refer to Ref. A Plate F-6504)	9065-106
	12	**Machine Screw, No. 14-24x1⅜"** Rd. Hd. S. (Cad. Pl.) for attaching Variable Resistance Units to Terminal Base.	
52795	13	**U-Bolt Complete with** ⅝" Hex. Nuts, for attaching Box to 5" Pipe.....	8782-99
118554	13a	**U-Bolt Complete** with ⅝" Hex. Nuts, for attaching Box to 4" Pipe	8782-99
183410	13b	**U-Bolt Complete** with ⅝" Hex. Nuts, for attaching Box to 3½" Pipe.....	8782-194

Style "H-10" Steel Houses

Considerable economy results where it is found possible to conveniently group relays and other vital signal equipment in one large rather than several small relay cases. Union Style "H-10" Steel Houses provide maximum facilities with the use of the best available materials.

Plates L-2067 and L-2069 give ordering references for a complete line of houses comprising the sizes and variety of facilities which experience has proved practical. Standard Style "H-10" Houses have an entrance door and a door unlocked from the inside only which gives access to the rear of a large terminal board and an opening in the floor for underground cables. For 8′-3″ wide houses, this latter door is located on the same end as the entrance door; the smaller 5 feet and 6 feet houses have the terminal board and door at the back.

The houses are equipped with vertical steel supports having slotted bolt head holes to which mounting boards or shelves for supporting relays, terminals, etc., may be attached.

When requested, two openings having hinged panel covers fastened from the inside are supplied in the back of 8′-3″ houses for ventilation. The door back of the terminal board of 5′ and 6′ houses may be opened for ventilation. Removable screened ventilators are provided in the roof and the entrance door.

A means for lifting the house is provided by removing the ventilator caps on the roof and inserting a chain sling through each ventilator and attaching it to a support in the top of the house. A hoist can then be used to move the house.

Exterior underground cables and wires may be brought up through the opening at the back of the terminal board; exterior wires going to a pole line are taken through a cable outlet above the door behind the terminal board.

Foundation plans will be furnished upon request.

ORDERING INSTRUCTIONS

If houses are to be factory wired, a complete set of circuit plans should be supplied. Factory wired houses are completely equipped with shelves or wall boards, electric lighting, floor mat, cable outlets for pole line wires, and terminal board.

Eyebolt, Ref. 7 Plate L-2067, for supporting overhead cable can be located any place on perimeter of roof; orders for houses should specify location desired. Customer should advise if code unit is used, as the third shelf from bottom is usually omitted in this case, or one shelf must be used when otherwise wall board mounting provisions are employed.

The following items are not included with houses and must be specified separately if required.

1. Ventilating panels in rear of 8′-3″ houses.

2. Maintainers Call Light (state location) Refs. 2 and 6 Plate L-2077.

3. Support Plate and Cable Outlets for use in hole in floor. Refs. 10 and 11 Plate L-2077.

4. Foundation Bolts.

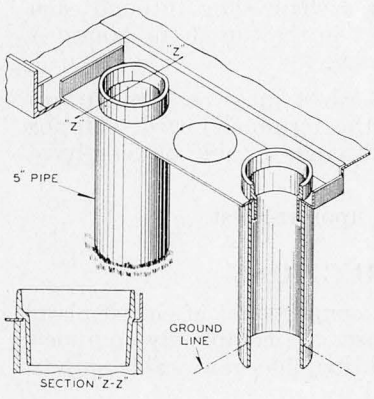
Orders for houses which are to be wired by customer must also contain the following information:

5. Number of shelves or wall boards and location. Refer to proper view Plate L-2073.

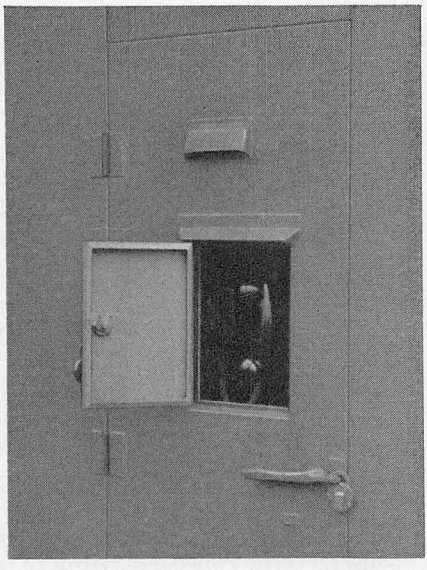
6. Number of cable outlets and location for exterior wires going to pole line. Ref. 9 Plate L-2077.

7. Size of Terminal Board. See View "Y" Plate L-2073.

8. Is electric lighting system desired?

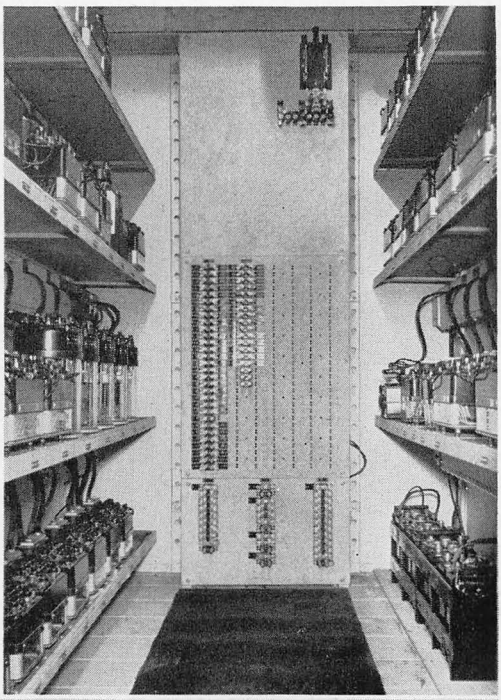


Views of opening in floor showing cable outlets, support plate and pipe for cable protection.

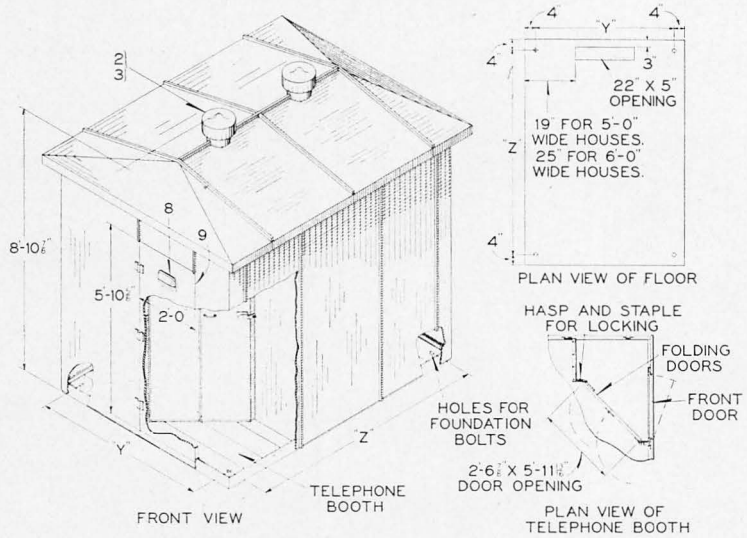


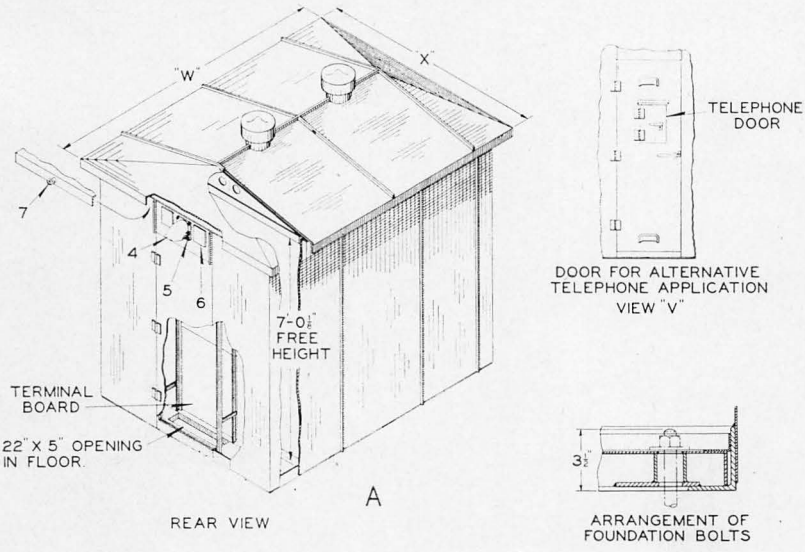
View of Door for Alternative Telephone Application

Inside view of 6 ft. x 8 ft. Style "H-10" House. Standard terminal arrangement and drilling is shown.



Below — Installation view of 8 ft. 3 in. x 10 ft. Style "H-10" House.





Style "H-10" Welded Steel Instrument Houses

5 Ft. and 6 Ft. Wide

Style "H-10" Welded Steel Instrument Houses

5 Ft. and 6 Ft. Wide

The 5 ft. houses can be furnished in 7 ft. length; the 6 ft. houses can be furnished in the following lengths: 8, 10 and 12 ft.

See ordering instructions as given in Plate L-2065 before placing orders.

In the tabulations below we list only the maximum lineal feet capacity for the various size houses in order to give the customer an idea of the space available for mounting apparatus. (By lineal feet of mounting space we mean the combined length of shelves or wall boards. Lineal feet of mounting space of battery boards and terminal boards are not included).

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Style "H-10" Welded Steel Instrument House without Telephone Booth (If Door arranged for Telephone, per View "V", is desired orders should so state) Orders for Houses should be accompanied with information as outlined under Ordering Instructions Plate L-2065. Dwg. D-2478.

Piece	Ref.	Size of House (Inside Dimensions)	Approx. Max. Lineal Feet for Apparatus Mounting	Dimensions			
				Length	Width	Foundation Bolt Spacing	
				"W"	"X"	"Y"	"Z"
	A	5'x 7'	54'–8"	7'–10¾"	6'– 0"	4'–4"	6'–4"
	Aa	6'x 8'	62'–8"	8'– 8⅛"	6'–10½"	5'–4"	7'–4"
	Ab	6'x10'	78'–8"	10'– 9⅜"	6'–10½"	5'–4"	9'–4"
	Ac	6'x12'	94'–8"	12'–10⅝"	6'–10½"	5'–4"	11'–4"

Style "H-10" Welded Steel Instrument House with Telephone Booth. (Orders for Houses should be accompanied with information as outlined under Ordering Instructions Plate L-2065.) Dwg. D-2478.

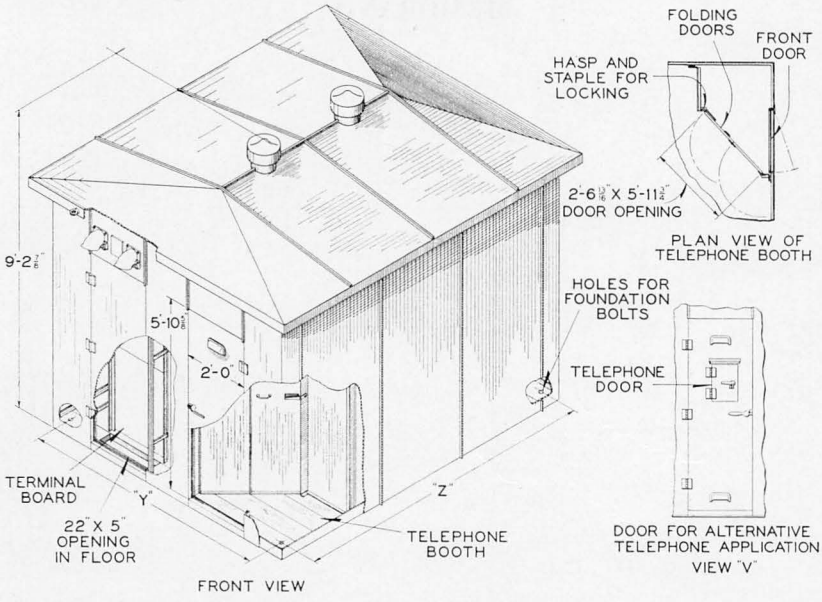
Piece	Ref.	Size of House (Inside Dimensions)	Approx. Max. Lineal Feet for Apparatus Mounting	Dimensions			
				Length	Width	Foundation Bolt Spacing	
				"W"	"X"	"Y"	"Z"
	Ad	6'x 8'	52'–8"	8'– 8⅛"	6'–10½"	5'–4"	7'–4"
	Ae	6'x10'	64'–8"	10'– 9⅜"	6'–10½"	5'–4"	9'–4"
	Af	6'x12'	84'–8"	12'–10⅝"	6'–10½"	5'–4"	11'–4"

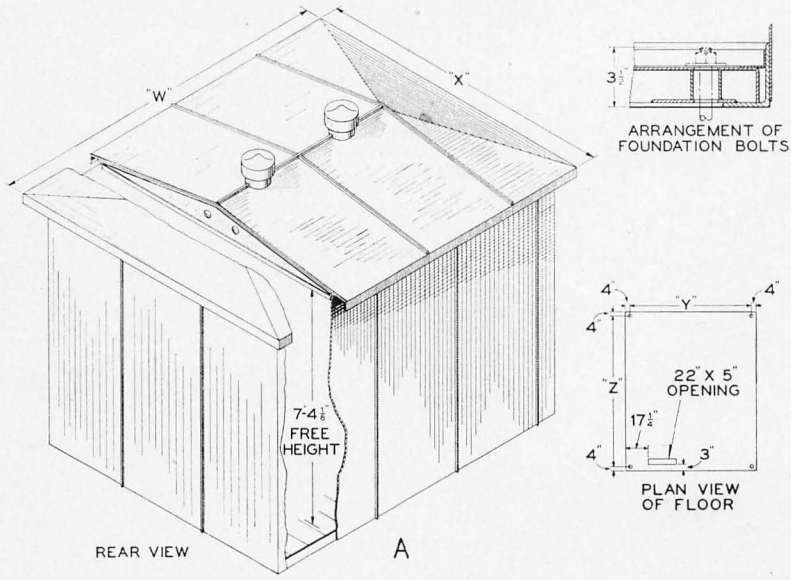
Style "H-10" Welded Steel Instrument Houses
5 Ft. and 6 Ft. Wide

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
223403	*2	**Ventilator Cap with Screen** Ref. 2a	C–9350–6
194680	*2a	**Ventilator Screen** for Ref. 2	7318–89
170083	*3	**Ventilator Shutter Complete**	C–9350–7
		*Shipped packed in House not assembled, to permit use of openings for crane lifting.	
192013	4	**Cable Outlet Complete** (For details refer to Plate L-2077)	B–10342–81
	5	**Bolt,** $\frac{3}{8}$″x1$\frac{1}{8}$″ Hex. Hd. S. (Cad. Pl. double thickness) with $\frac{3}{8}$″ Hex. Nut (Cad. Pl. double thickness) and $\frac{3}{8}$″ Pl. S. Lock Washer ($\frac{11}{64}$″x$\frac{7}{64}$″) (Cad. Pl.) for attaching Cable Outlet and Cover Plate to House.	
173513	6	**Cover Plate,** to cover hole when Cable Outlet Ref. 4 is not used	9999–850
	7	**Eye Bolt,** $\frac{5}{8}$″ dia. (Cad. Pl. double thickness) with $\frac{5}{8}$″ Hex. Nut (Cad. Pl.) and $\frac{5}{8}$″ Pl. S. Lock Washer (Cad. Pl.) For supporting overhead cable. Can be located any place on perimeter of roof.	
172630	8	**Ventilator Screen** for door ventilators	7318–83
	9	**Door Packing,** 15′–10″ long	8078–1565
	9a	**Door Packing,** 3′–10″ long. For Telephone Door	8078–1565





Style "H-10" Welded Steel Instrument Houses

8 Ft. 3 In. Wide

Style "H-10" Welded Steel Instrument Houses

8 Ft. 3 In. Wide

The 8′-3″ houses can be furnished in the following lengths: 10 and 12 ft.

See ordering instructions as given in Plate L-2065 before placing orders.

In the tabulations below we list only the maximum lineal feet capacity for the various size houses in order to give the customer an idea of the space available for mounting apparatus. (By lineal feet of mounting space we mean the combined length of shelves or wall boards. Lineal feet of mounting space of battery boards and terminal boards are not included).

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

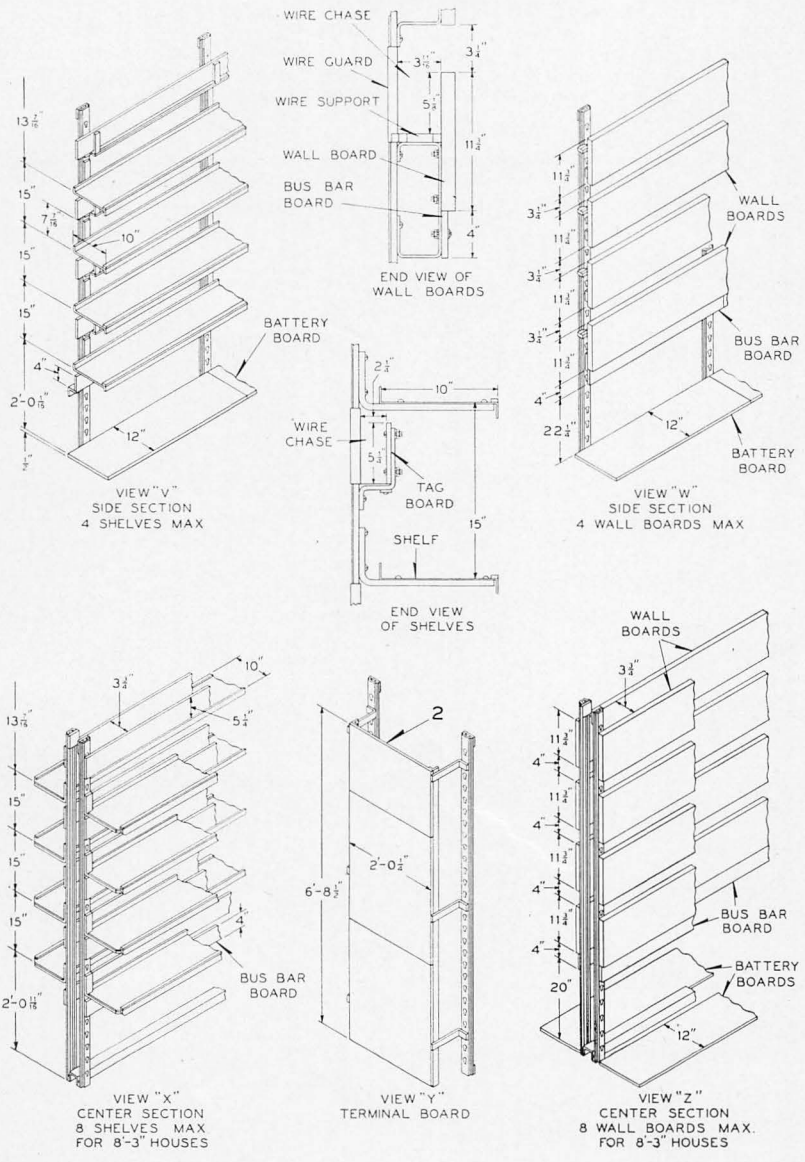
Style "H-10" Welded Steel Instrument House Without Telephone Booth (If Door arranged for Telephone, per View "V", is desired orders should so state) Orders for Houses should be accompanied with information as outlined under Ordering Instructions Plate L-2065. Dwg. D-2478.

Piece	Ref.	Size of House (Inside Dimensions)	Approx. Max. Lineal Feet for Apparatus Mounting	Dimensions			
				Length	Width	Foundation Bolt Spacing	
				"W"	"X"	"Y"	"Z"
	A	8′–3″x10′	138′–8″	10′–9⅜″	9′–3″	7′–7″	9′–4″
	Aa	8′–3″x12′	170′–8″	12′–9⅜″	9′–3″	7′–7″	11′–4″

Style "H-10" Welded Steel Instrument House with Telephone Booth. (Orders for Houses should be accompanied with information as outlined under Ordering Instructions Plate L-2065.) Dwg. D-2478.

Piece	Ref.	Size of House (Inside Dimensions)	Approx. Max. Lineal Feet for Apparatus Mounting	Dimensions			
				Length	Width	Foundation Bolt Spacing	
				"W"	"X"	"Y"	"Z"
	Ab	8′–3″x10′	125′–0″	10′–9⅜″	9′–3″	7′–7″	9′–4″
	Ac	8′–3″x12′	157′–0″	12′–9⅜″	9′–3″	7′–7″	11′–4″

For all other details refer to Plate L-2067.



Mounting Fittings for Style "H-10" Welded Steel Instrument Houses

Mounting Fittings for Style "H-10" Welded Steel Instrument Houses

On this plate we show our standard arrangements for shelves, wall boards, terminal boards, etc. The Views on this Plate show the maximum number of shelves, wall boards, etc., that can be placed on the sides or center section of the various size houses. Arrangement of mounting fittings can be varied to suit customer so long as the maximum is not exceeded. If Houses are prewired at our factory the mounting fittings will be arranged to suit the apparatus to be mounted. Orders for Houses which are to be wired by the customer should list the number of shelves, wall boards, terminal boards, etc. desired and location of same.

Size of House (Inside Dimensions)	Length of Shelves or Wall Boards for Houses Without Telephone Booths				*Approx. Max. Lineal Feet Capacity of House for Apparatus Mounting
	Shelves		Wall Boards		
	Side of House	Center Section	Side of House	Center Section	
5′x7′	6′–10¾″	.....	6′–9″	.....	54′–8″
6′x8′	7′–9½″	.....	7′–9″	.....	62′–8″
6′x10′	9′–9½″	.....	9′–9″	.....	78′–8″
6′x12′	11′–10¼″	.....	11′–9″	.....	94′–8″
8′–3″x10′	9′–0″	7′–5″	9′–9″	7′–5″	138′–8″
8′–3″x12′	11′–0″	9′–5″	11′–9″	9′–5″	170′–8″

Size of House (Inside Dimensions)	Length of Shelves or Wall Boards for Houses With Telephone Booths				*Approx. Max. Lineal Feet Capacity of House for Apparatus Mounting
	†Shelves		†Wall Boards		
	Side of House	Center Section	Side of House	Center Section	
6′x 8′	5′–5⅝″	.....	5′–5″	.....	52′–8″
6′x10′	7′–5⅝″	.....	7′–5″	.....	68′–8″
6′x12′	9′–5⅝″	.....	9′–4⅜″	.....	84′–8″
8′–3″x10′	7′–4¾″	7′–5″	8′–1¾″	7′–5″	125′–0″
8′–3″x12′	9′–4¾″	9′–5″	10′–1¾″	9′–5″	157′–0″

*Based on House equipped with maximum number of shelves or wall boards. Lineal feet of mounting space of battery boards and terminal boards are not included.

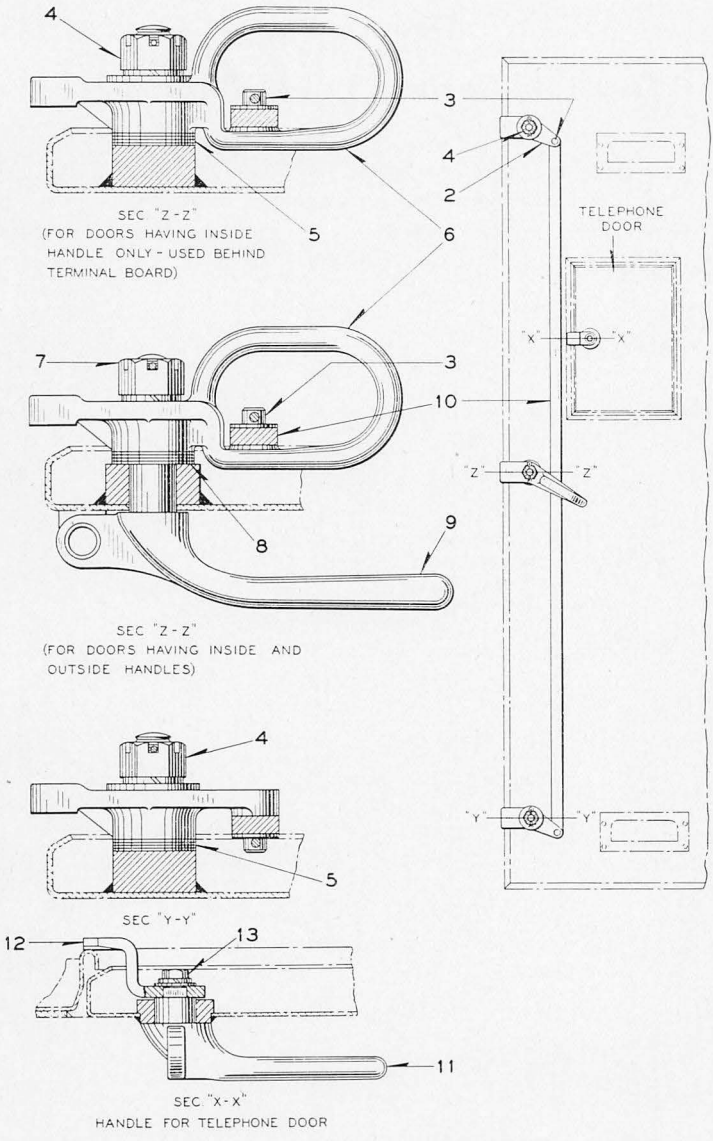
†Lengths are for shelves and wall boards mounted on telephone booth side of houses. For lengths of shelves and wall boards mounted on opposite side of houses see tabulation for Houses without Telephone Booths.

Mounting Fittings for Style "H-10" Welded Steel Intrument Houses

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	‡2	**Terminal Board,** 15½"x2'-0¼" (As shown).....	C–9268–
	‡2a	**Terminal Board,** 17"x2'-0¼".....	C–9268–
	‡2b	**Terminal Board,** 2'-7"x2'-0¼".....	C–9268–
	‡2c	**Terminal Board,** 2'-8½"x2'-0¼" (As shown).....	C–9268–
		‡Specify whether Transite or Plywood is desired.	



Door Handles, Lock Bars, Etc. for Style "H-10" Houses

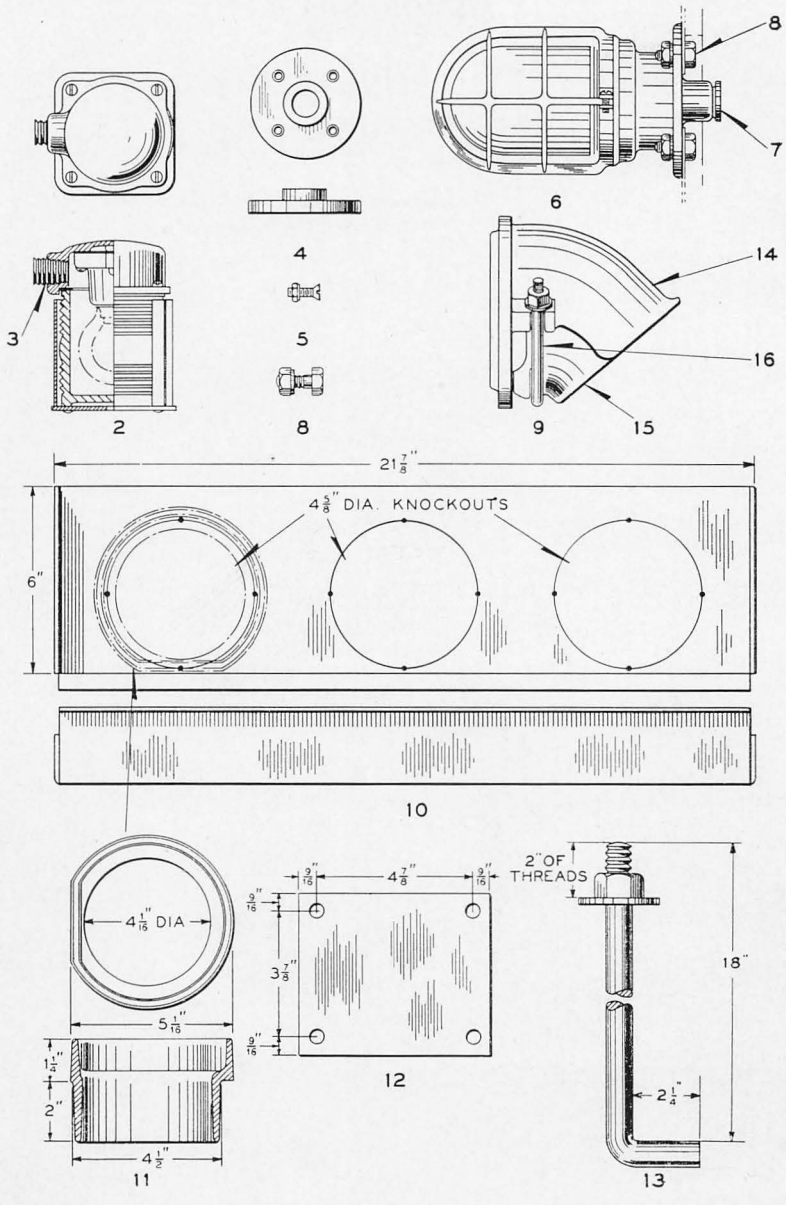
Style "H-10" Welded Steel Instrument Houses

Detail Parts

Door Handles, Lock Bars, Etc.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
196155	2	**Crank**	8192–403
	3	**Stud,** Ref. 3a, with Washer Ref. 3b and $\frac{3}{16}$"x1$\frac{1}{8}$" S. Cotter. For attaching Lock Bar to Cranks and Inside Door Handle	8115–122
171216	3a	**Stud only**	8115–122
7309	3b	**Washer**	7826–12
	4	$\frac{3}{4}$" **Slotted Hex. Nut** (Slotted $\frac{7}{32}$" W. x $\frac{1}{4}$" D.) with $\frac{1}{8}$"x1$\frac{1}{2}$" S. Cotter, $\frac{3}{4}$" S. Plate Washer and $\frac{3}{4}$" Pl. S. Lock Washer ($\frac{1}{4}$"x$\frac{1}{8}$").	
195358	5	**Washer** (Used between Crank Ref. 2 and Doors and between Inside Door Handle and Door having inside handle only)	7826–272
196156	6	**Inside Door Handle**	8192–404
	7	$\frac{3}{4}$" **Slotted Hex. Nut** (Slotted $\frac{7}{32}$" W. x $\frac{1}{4}$" D.) with $\frac{1}{8}$"x1$\frac{1}{2}$" S. Cotter and $\frac{3}{4}$" Pl. S. Lock Washer ($\frac{1}{4}$"x$\frac{1}{8}$").	
196160	8	**Washer** (Used between Inside Door Handle and Front Door)	7826–272
196154	9	**Outside Door Handle**	8311–106
196158	10	**Lock Bar**	12464–13
235278	11	**Door Handle** (For Telephone Door)	8311–101
235325	12	**Latch**	8236–52
	13	**Tap Bolt,** $\frac{5}{16}$"-18x$\frac{3}{4}$" Hex. Hd. S. (Cad. Pl.) with $\frac{5}{16}$" Std. Plate Washer (Cad. Pl.) and $\frac{5}{16}$" Pl. S. Lock Washer ($\frac{5}{32}$"x$\frac{3}{32}$") (Cad. Pl.).	
194501	14	**Gasket** (Used between Separator and Handle Ref. 11) (Not shown)	8078–1586



Maintainers Call Lights, Cable Outlets, Etc. For Style "H-10" Houses

Style "H-10" Welded Steel Instrument Houses

Detail Parts

Maintainers Call Lights, Cover Plate, Cable Outlets, Etc.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
161629	2	**Maintainers Call Light Complete** for use with Single Contact Bayonet Candelabra Base Lamp Bulb (Without Lamp Bulb or Nipple Ref. 3) (Similar to Ref. Aa of Plate K-137 except with clear lens)	B–12663–1
213704	3	**Nipple**	B–10375–2
	4	**Floor Flange,** $\frac{1}{2}$"x3$\frac{1}{2}$" C.I. For use with Call Light Ref. 2.	
	5	**Stove Bolt,** $\frac{1}{4}$"x$\frac{3}{4}$" Flat Hd. with Hex. Nut and $\frac{1}{4}$" Pl. S. Lock Washer ($\frac{3}{32}$"x$\frac{1}{16}$") for attaching Floor Flange Ref. 4 to side of House.	
	6	**Maintainers Call Light Complete** for use with standard Screw Base Lamp Bulb (Without Lamp Bulb, Nipple Ref. 7 or Bolts Ref. 8).	
	7	**$\frac{1}{2}$" Nipple.**	
	8	**Bolt,** $\frac{3}{8}$"x1$\frac{1}{8}$" Hex. Hd. S. (Cad. Pl. double thickness) with $\frac{3}{8}$" Hex. Nut (Cad. Pl. double thickness) and $\frac{3}{8}$" Pl. S. Lock Washer ($\frac{11}{64}$"x$\frac{7}{64}$") (Cad. Pl.) for attaching Call Light Ref. 6, Cable Outlet Ref. 9 and Cover Plate Ref. 12 to House.	
192013	9	**Cable Outlet Complete** for bringing overhead wires into House. (Inside area 10 sq. inches)	B–10342–81
235060	10	**Support Plate** for use with Ref. 11 for bringing cable through hole in floor. Accommodates a maximum of three Cable Outlets	C–9489–49
221710	11	**Cable Outlet** (Inside area 13 sq. inches). For bringing cables through hole in floor	B–10342–126
173513	12	**Cover Plate.** For blanking out holes when Cable Outlet Ref. 9 is not used	9999–850
	13	**Foundation Bolt,** Ref. 13a, with Washer Ref. 13b and $\frac{3}{4}$" Hex. Nut	7913–44
10478	13a	**Foundation Bolt only,** $\frac{3}{4}$"x18"	7913–44
73628	13b	**Washer**	7826–180

Style "H-10" Welded Steel Instrument Houses

Detail Parts

Maintainers Call Lights, Cover Plate, Cable Outlets, Etc.

(**Continued**)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
192011	**14**	**Cable Outlet** (Upper half of Ref. 9)	B–10342–81
192012	**15**	**Clamp** (Lower half of Ref. 9)	B–10342–81
	16	**U-Bolt**, Ref. 16a, with two ⅜″ S. Hex. Nuts (with tap .005″ larger than min. p.d., Cad. Pl. double thickness) and two S. Plate Washers (Cad. Pl. double thickness)	8782–200
192010	**16a**	**U-Bolt Only**	8782–200

Section

L

HOUSINGS

Steel Relay and Terminal Cabinets Multiple Unit Type

and

Steel Relay and Instrument Cases

(Revised August, 1931, Supersedes Issues of November, 1923 and August, 1929)

Union Switch & Signal Co.

Swissvale, Pa.

Aug., 1931

Printed in U.S.A.

Remove Staple Before Filing Pages in Loose Leaf Cover

PREFACE

A system of cataloging necessitates very liberal assignment of plate numbers to permit of future listing of parts logically and in harmony with past practice. The Sectional loose-leaf system adopted by this Company in 1911, although meeting most demands, does not allow of sufficient expansion. All catalogs issued from December 1920 will be compiled on a new method of classification of apparatus. Piece numbers will be an important feature of the ordering reference.

Part catalogs will be printed as soon as possible after new material is developed or old material is redesigned, and ultimately the information given in pamphlet form will be reprinted and grouped under proper classifications in loose-leaf binders. Old catalogs will remain in vogue until they are completely incorporated under the new system. It will be noted in the following classification outline that material cataloged in former sections A, B and C will retain the same prefix letter; but will form a subdivision of a more general classification.

MAIN CLASSIFICATIONS

Section

A—Interlocking Machines.
B—Signals.
C—Switch and Lock Movements, Layouts and Ground Material.
D—
E—Relays, Indicators and Locks.
F—Transformers, Reactors, Resistors, and Impedance Bonds.
G—
H—
I—
J—Circuit Controllers.
K—Highway Crossing Protective Devices.
L—Housings.
M—Insulated Rail Joints.
N—Automatic Train Control and Stops.
O—
P—Bond Wires, Trunking, Lightning Arresters, Terminals, Electro-Pneumatic Fittings, and Accessories. (Power Generators and Distributing Apparatus.)
R—Car Retarders.
S—Rectifiers.
T—Centralized Traffic Control.

UNION SWITCH & SIGNAL CO.

TABLE OF CONTENTS

SECTION "L"

STEEL RELAY CABINETS
MULTIPLE UNIT TYPE

	Pages 4 and 5 Plate
General Information	
STEEL RELAY CABINETS, MULTIPLE UNIT TYPES (WITH MULTIPLE UNIT TERMINAL BLOCKS)	L-4001
DETAILS OF STEEL RELAY CABINETS (ASSEMBLY FITTINGS)	L-4005
DETAILS OF STEEL RELAY CASE (HAVING WOOD TERMINAL BOARDS)	L-4010
DETAILS OF STEEL RELAY AND TERMINAL CASE (HAVING MULTIPLE UNIT TERMINAL BLOCKS)	L-4011
DETAILS OF STEEL RELAY AND TERMINAL CASE (HAVING WOOD TERMINAL BOARDS)	L-4015
DETAILS OF STEEL TERMINAL CASE (HAVING WOOD TERMINAL BOARDS)	L-4020
DETAILS OF STEEL TERMINAL CASE (HAVING MULTIPLE UNIT TERMINAL BLOCKS)	L-4021
MULTIPLE UNIT TERMINAL BOARDS	L-4030
2′ 7½″ SHEET STEEL RELAY AND INSTRUMENT CASE (ONE FRONT DOOR, ONE REAR DOOR AND TWO TERMINAL BOARD PANELS)	L-4050
4′ 11″ SHEET STEEL RELAY AND INSTRUMENT CASE (TWO FRONT DOORS AND TWO REAR DOORS)	L-4055
4′ 11″ SHEET STEEL RELAY AND INSTRUMENT CASE (TWO FRONT DOORS, TWO REAR DOORS AND THREE TERMINAL BOARD PANELS)	L-4060
6′ 9″ SHEET STEEL RELAY AND INSTRUMENT CASE (TWO FRONT DOORS AND TWO REAR DOORS)	L-4065
9′ 8″ SHEET STEEL RELAY AND INSTRUMENT CASE (FOUR FRONT DOORS AND FOUR REAR DOORS)	L-4070
STEEL TOWER RELAY CASE	L-4080

STEEL RELAY CABINETS
MULTIPLE UNIT TYPE

Relay Cabinets are an essential to a complete interlocking installation. The planning and construction of cabinets or racks by railroad signal departments to suit local conditions have been troublesome problems, and standardization made difficult.

The Union Multiple Unit Steel Relay Cabinet is designed to meet rigid specifications and, due to its flexibility of application, its use can be standardized in the great majority of cases.

These Cabinets are of sheet steel throughout, reinforced by steel angles to which the sides, bottom and shelves are either spot welded or riveted, and can be furnished in any combination desired, see diagrams W, X, Y and Z, Plate L-4001.

Sections are fitted together and held in alignment by means of dowels. A 3¾ inch space is provided between tiers for vertical wire chases. Sheet steel covers fit over the front and top of this space, being held in place by studs from which they can be easily lifted.

Relay Case Section:

Relay Case sections are divided into two compartments, each having a capacity of three D. C. or SLV-13 Relays or two relays of the Model 15 A. C. Vane type. Each section is also equipped with eight terminal blocks of moulded bakelite hinged to sheet steel supports in the upper part of the compartment. Each terminal block measures 3″x4″ and carries nine A.R.A. terminals grouped around four holes which are provided for wiring. Since the location of terminal posts is determined by varying equipment used in each case, the terminal posts, nuts and washers are shipped separately so that they can be mounted to suit existing conditions. Unless otherwise specified, 48 terminals will be supplied for each compartment. By swinging the terminal blocks forward, access can be had to a horizontal wire run.

Combined Relay and Terminal Case Section:

Each combined relay and terminal case section has one relay shelf equipped with eight Terminal Blocks arranged for mounting a maximum of 72 Terminal Posts (48 Terminals supplied) and the

lower compartment has four rows vertical Terminal Blocks, having a maximum of 45 Terminal Posts each. The bottom compartment of the combined Relay and Terminal Case has openings so wires can be run directly from the 7″x12″ base section to the Terminals.

Terminal Case Section:

Terminal Case sections have two compartments each equipped with two rows Vertical Terminal blocks arranged for mounting a maximum of 45 Terminal Posts each. The bottom compartment of the Terminal Case has openings so wires can be run directly from the 7″x12″ base section to the Terminals.

The doors are of sheet steel, hinged, and held closed by turning knobs which operate latches. The doors may be either plain or with glass windows as illustrated. Those with windows are standard and will be furnished unless plain doors are specified.

Relay Shelves are $11\frac{9}{16}$″ Deep by $25\frac{7}{8}$″ Long.

Openings ($2\frac{3}{4}$″x5″) at both ends of each compartment provide for wires being carried to the vertical chases. Steel covers are supplied for exposed openings in end sections.

Wire chases can be furnished to run from the top of the relay case to the interlocking machine on the upper floor of the tower when desired but are not furnished unless specially called for.

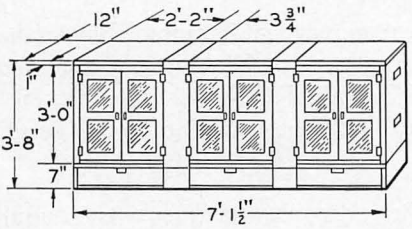
Cabinets and Chases are given a high finish by successive coats of olive green enamel, baked on.

Advantages of Union Steel Relay Housings are:

1. All wires accessible from front of cabinet, facilitating inspection.
2. May be placed with back to the wall or with sections back to back, thus saving valuable floor space.
3. Prevent the spread of fire should one result from any cause.
4. Flexibility in application, being designed upon the multiple unit principle.
5. Relays protected from dust by easily opened doors.

PLATE L-4001

UNION SWITCH & SIGNAL CO.



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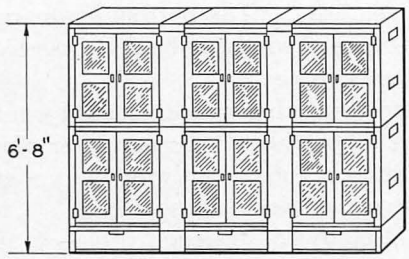

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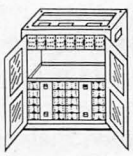

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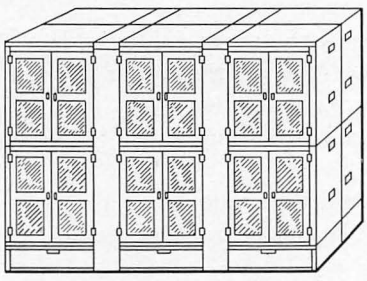
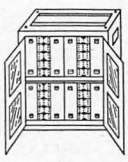


Y



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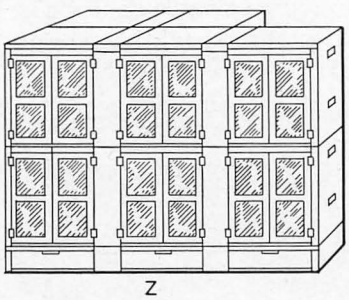


Z

STEEL RELAY CABINETS

MULTIPLE UNIT TYPE TERMINALS

UNION SWITCH & SIGNAL CO.

STEEL RELAY CABINETS
MULTIPLE UNIT TYPE TERMINALS

All cases are furnished with terminals as listed below unless otherwise specified.
Case Ref. A includes a total of 96 Terminals.
Case Ref. B includes a total of 228 Terminals.
Case Ref. C includes a total of 180 Terminals.
(Terminals are not assembled on Terminal Board when shipped from factory.)

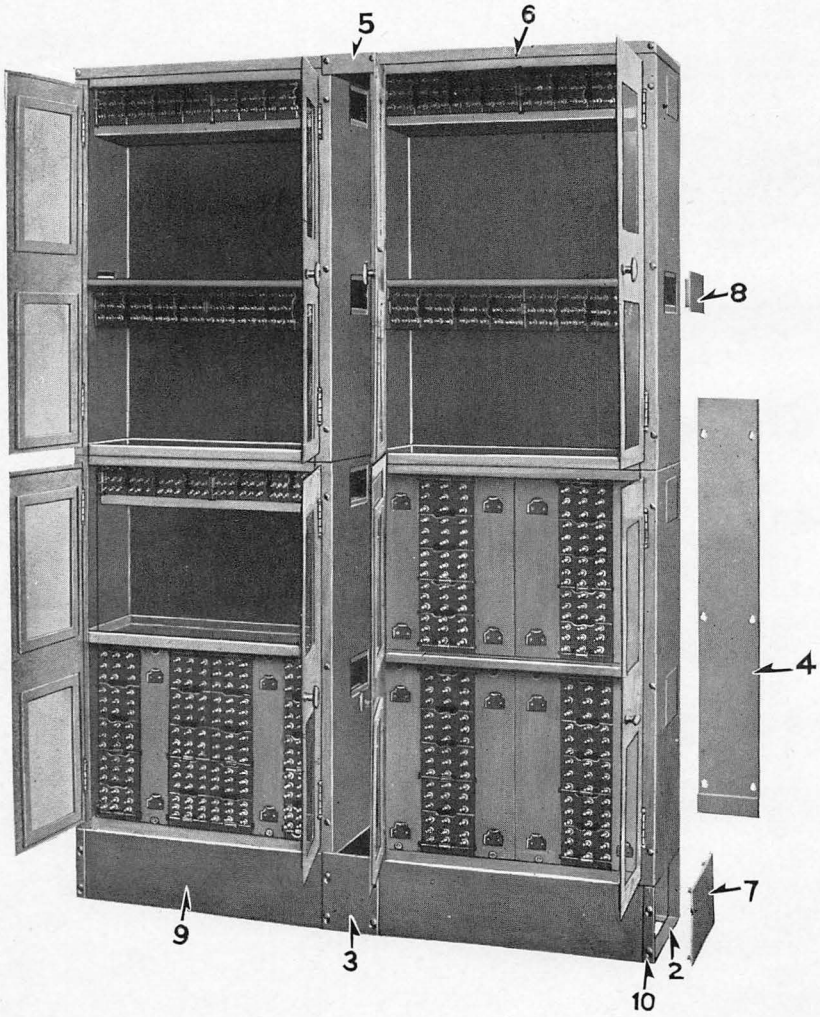
For details of Cabinets refer to Plates L-4005, L-4011 and L-4021. All cases can be arranged for padlock if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
173402	**A**	**Steel Relay Case Section,** complete with glass doors as shown (For details refer to Plate L-4011).....	B–15295–4
173403	**Aa**	**Steel Relay Case Section,** complete with plain doors (For details refer to Plate L-4011).....	B–15295–4
173404	**B**	**Steel Relay and Terminal Case Section,** complete with glass doors as shown (For details refer to Plate L-4011).....	B–15295 4
173405	**Ba**	**Steel Relay and Terminal Case Section,** complete with plain doors (For details refer to Plate L-4011)	B–15295–4
	C	**Steel Terminal Case Section,** complete with glass doors as shown (For details refer to Plate L-4021)	B–15295–4
173406	**Ca**	**Steel Terminal Case Section,** complete with plain doors (For details refer to Plate L-4021).....	B–15295–4
		Complete Assemblies The arrangement of assemblies should be specified as W, X, Y or Z in order that the proper number of bases, tops, vertical wire chase and end covers may be shipped with an order. An example of form for ordering complete cabinets is:—One 8-way Steel Relay Cabinet, complete, consisting of 6 relay case sections Ref. A, 1 relay and terminal case section Ref. B and 1 Terminal case section Ref. C arranged as per diagram Y.	

PLATE L-4005

UNION SWITCH & SIGNAL CO.



DETAILS OF STEEL RELAY CABINET

(ASSEMBLY FITTINGS)

UNION SWITCH & SIGNAL CO.

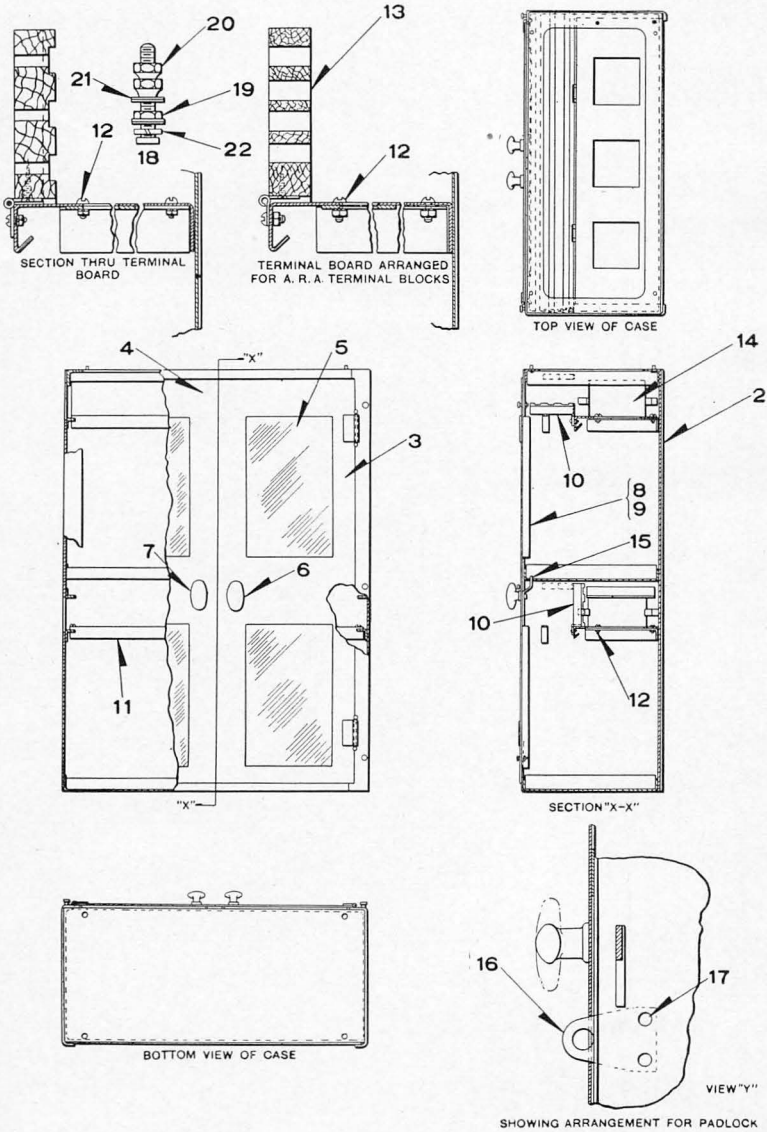
DETAILS OF STEEL RELAY CABINET
(ASSEMBLY FITTINGS)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
117799	**2**	**Base**	D–2315–3
117792	**3**	**Base Conduit Cover**	12530–32
129309	**4**	**Case Conduit Cover**	12530–33
117794	**5**	**Top Conduit Cover**	12530–34
117767	**6**	**Top**	12530–28
117803	**7**	**Base End Cover Plate**	12530–39
117773	**8**	**Case End Cover Plate**	12530–29
120008	**9**	**Base Front Cover Plate**	12530–50
120007	**10**	**Corner Plate**	12530–49

PLATE L-4010

UNION SWITCH & SIGNAL CO.



DETAILS OF STEEL RELAY CASE

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL RELAY CASE

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
129755	**2**	**Case only** (without Doors, Shelves and Terminal Boards)	D-2315-2
117769	**3**	**R. H. Glass Door**	B-12531-1
117771	**3a**	**R. H. Plain Door**	B-12531-3
126951	**3b**	**R. H. Glass Door** (Arranged for padlock)	B-12531-1
126952	**3c**	**R. H. Plain Door** (Arranged for padlock)	B-12531-3
117770	**4**	**L. H. Glass Door**	B-12531-2
117772	**4a**	**L. H. Plain Door**	B-12531-4
117806	**5**	**Glass** for Doors Refs. 3, 3b and 4	12530-35
117753	**6**	**R. H. Door Knob** for Refs. 3 and 3a	12530-22
117752	**7**	**L. H. Door Knob** for Refs. 4 and 4a	12530-21
120190	**8**	**Frame** for Holding Glass	12530-54
	9	**Machine Screw No. 6-40x1/4"** Rd. Hd. S. for fastening Ref. 8 to Doors.	
120312	**10**	**Terminal Board only** (without Terminal Posts)	B-10364-25
117734	**11**	**Terminal Board Shelf**	12530-3
	12	**Stove Bolt, 5/32"x3/8"** Rd. Hd. with Sq. Nut and 3/16" Plain S. Lock Washer (3/32"x1/32").	
146642	**13**	**Terminal Board** (Used for A. R. A. Terminal Blocks)	B-10364-47
117773	**14**	**Case End Cover Plate**	12530-29

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL RELAY CASE

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

(Continued)

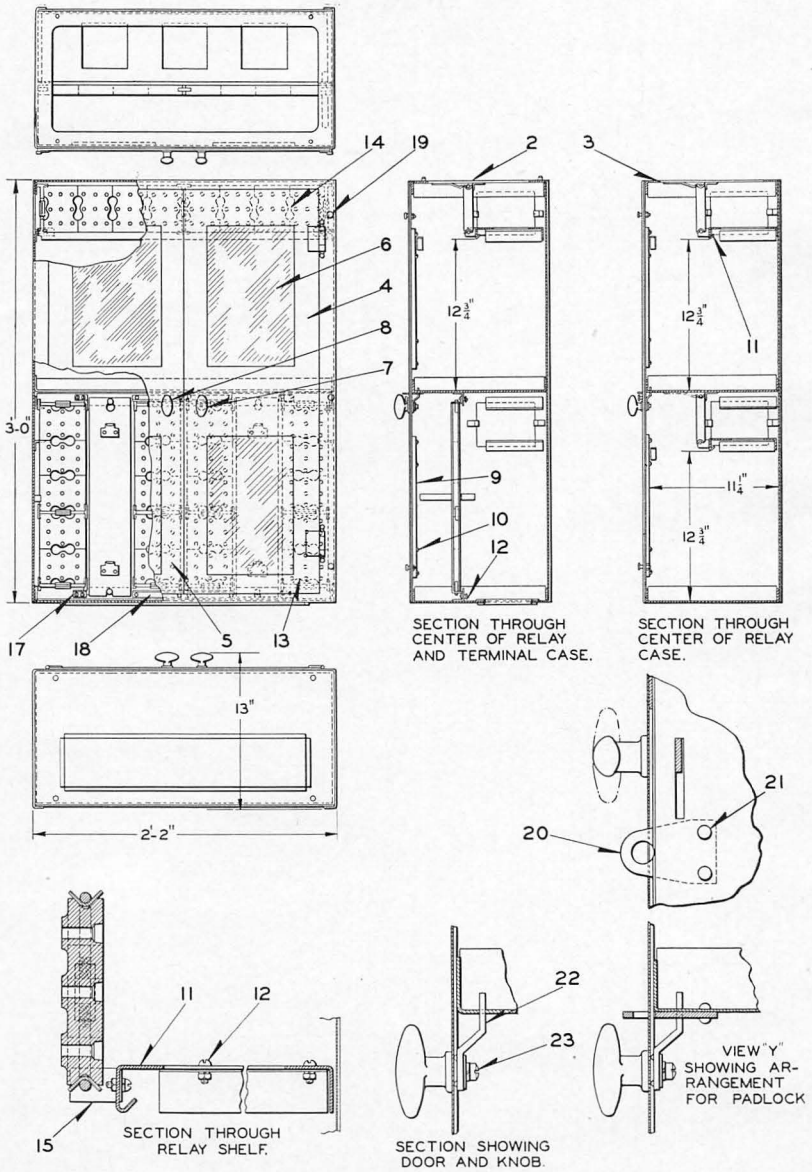
All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
130220	**15**	**Latch** for doors Refs. 3 and 3a	B–12531–23
52856	**16**	**Staple** (used when doors are to be arranged for padlock)	8191–84
	17	**Rivet,** $\frac{3}{16}$"x$\frac{3}{8}$" Rd. Hd. I. for fastening Ref. 16 to Case.	
	18	**Terminal Post** with Nuts, Washers and Lock Washer (Inc. 1-18a, 1-19, 2-20, 4-21 and 1-22)	12451–
31668	**18a**	**Terminal Post only,** for Ref. 18	8094–706
29103	**19**	**Nut** for Ref. 18	8109–194
29101	**20**	**Nut** for Ref. 18	8109–193
29102	**21**	**Washer** for Ref. 18	7828–139
	22	**¼" Plain S. Lock Washer** ($\frac{1}{8}$"x$\frac{1}{16}$") for Ref. 18.	

PLATE L-4011

UNION SWITCH & SIGNAL CO.



DETAILS OF STEEL RELAY AND TERMINAL CASE

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASE
DETAIL PARTS

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
160626	**2**	**Case only** (without Doors, Terminal Boards and Terminal Board Shelf) for Relay and Terminal Case	D–2315–6
160629	**3**	**Case only** (without Doors, Terminal Boards and Terminal Board Shelf) for Relay Case	D–2315–6
117769	**4**	**R. H. Glass Door**	B–12531–1
117771	**4a**	**R. H. Plain Door**	B–12531–3
126951	**4b**	**R. H. Glass Door** (Arranged for padlock)	B–12531–1
126952	**4c**	**R. H. Plain Door** (Arranged for padlock)	B–12531–3
117770	**5**	**L. H. Glass Door**	B–12531–2
117772	**5a**	**L. H. Plain Door**	B–12531–4
117806	**6**	**Glass** for doors, Refs. 4, 4b and 5	12531–35
117753	**7**	**R. H. Door Knob** with Screw Ref. 23, Washer Ref. 24 and ¼″ Plain S. Lock Washer (1/16″x1/16″)	12530–22
117752	**8**	**L. H. Door Knob** with Screw Ref. 23a and ¼″ Plain S. Lock Washer (1/16″x1/16″)	12530–21
120190	**9**	**Frame** for holding glass	12530–54
	10	**Machine Screw No. 6-40x¼″** Rd. Hd. S. for fastening Ref. 9 to Door.	
160106	**11**	**Terminal Board Shelf**	12530–74
	12	**Stove Bolt,** 5/32″x**3/8**″ Rd. Hd. with Sq. Nut and 3/16″ Plain S. Lock Washer (3/32″x1/32″).	
160516	**13**	**Vertical Terminal Board** (45-Way) with Hook Bolts and Turnbuckle (Without Terminal Posts For details see Plate L-4030	B–10364–54

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASE

DETAIL PARTS

(Continued)

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

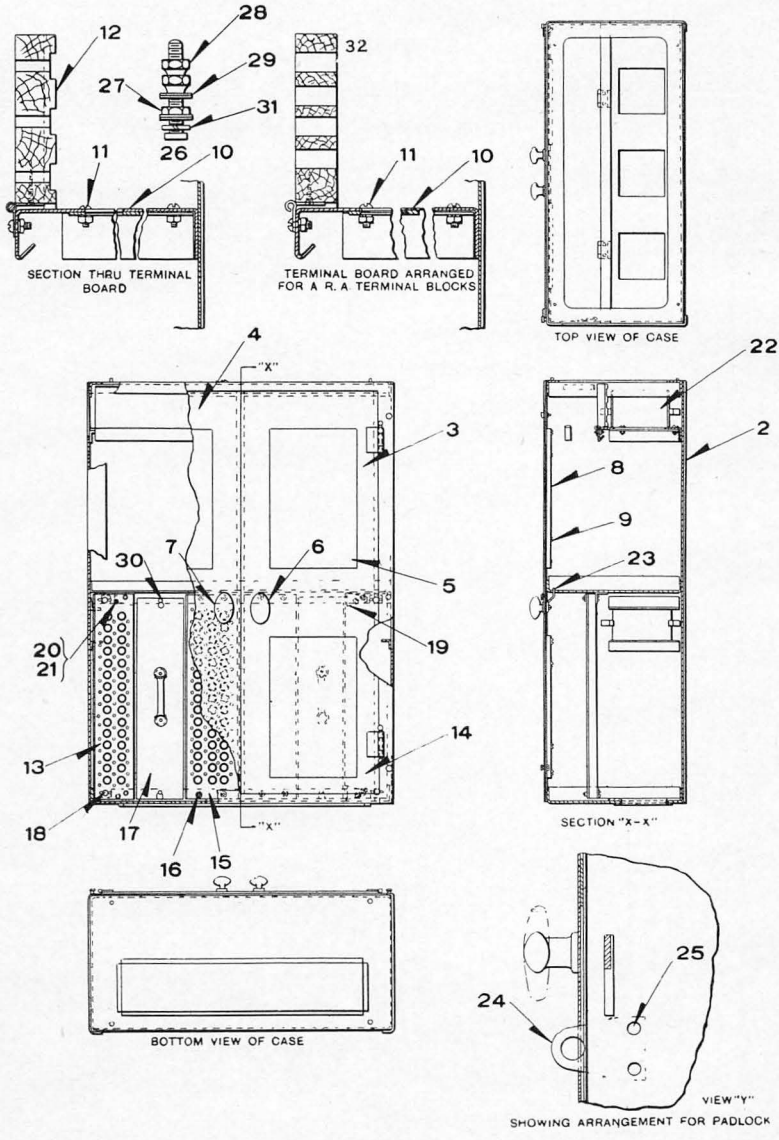
All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
160517	**14**	**Horizontal Terminal Board** (72-Way) with Hook Bolts and Turnbuckle (without Terminal Posts) For details see Plate L-4030	B–10364–54
160063	**15**	**Support**	12530–62
160037	**16**	**Cover** for Wire Chase	12530–71
160062	**17**	**Support**	12530–62
160105	**18**	**Angle**	12530–73
117747	**19**	**Conduit Cover Stud** with Nut Ref. 19a	12530–16
94344	**19a**	**Nut** for Ref. 19	8265–70
52856	**20**	**Staple** (used when doors are to be arranged for padlock)	8191–84
	21	**Rivet,** $\frac{3}{16}$"x$\frac{3}{8}$" Rd. Hd. I. for Ref. 20.	
130220	**22**	**Latch,** for Doors, Refs. 4, 4a, 4b and 4c	B–12531–23
	23	**Machine Screw No. 14-24x$\frac{3}{4}$"** Fil. Hd. S. for Ref. 7.	
	23a	**Machine Screw No. 14-24x$\frac{5}{8}$"** Fil. Hd. S. for Ref. 8.	
50682	**24**	**Washer** only for Refs. 7 and 23	7826–117

PLATE L-4015

UNION SWITCH & SIGNAL CO.



DETAILS OF STEEL RELAY AND TERMINAL CASE

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL RELAY AND TERMINAL CASE
FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
129754	**2**	**Case only** (without Doors, Shelves and Terminal Boards)	D–2315–1
117769	**3**	**R. H. Glass Door**	B–12531–1
117771	**3a**	**R. H. Plain Door**	B–12531–3
126951	**3b**	**R. H. Glass Door** (Arranged for padlock)	B–12531–1
126952	**3c**	**R. H. Plain Door** (Arranged for padlock)	B–12531–3
117770	**4**	**L. H. Glass Door**	B–12531–2
117772	**4a**	**L. H. Plain Door**	B–12531–4
117806	**5**	**Glass** for doors Refs. 3, 3b and 4	12531–35
117753	**6**	**R. H. Door Knob** for Refs. 3, 3a, 3b and 3c	12530–22
117752	**7**	**L. H. Door Knob** for Refs. 4 and 4a	12530–21
120190	**8**	**Frame** for Holding Glass	12530–54
	9	**Machine Screw No. 6-40x1/4″** Rd. Hd. S. for fastening Ref. 8 to Doors.	
117734	**10**	**Terminal Board Shelf**	12530–3
	11	**Stove Bolt, 5/32″x3/8″** Rd. Hd. with Sq. Nut and 3/16″ Plain S. Lock Washer (3/32″x1/32″).	
120312	**12**	**Terminal Board only** (Without Terminal Posts)	B–10364–25
129216	**13**	**L. H. Terminal Board only** (Without Terminal Posts)	B–10364–34
130920	**14**	**R. H. Terminal Board only** (Without Terminal Posts)	B–10364–37
129217	**15**	**Terminal Board** (Without Terminal Posts)	B–10364–34

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL RELAY AND TERMINAL CASE

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

(Continued)

All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	16	**Stove Bolt,** 1/4″x1 1/4″ Rd. Hd. with Sq. Nut and 1/4″ Std. Plate Washer.	
148307	**17**	**Cover**	12530–57
95852	**18**	**Latch**	B–9955–1
131309	**19**	**Hinge**	12426–21
	20	**Stove Bolt,** 3/16″x3/8″ with Sq. Nut and 3/16″ Plain S. Lock Washer (3/32″x1/32″) for fastening Ref. 19 to Case.	
	21	**Stove Bolt,** 3/16″x1″ Rd. Hd. with Sq. Nut, 3/16″ Plate Washer and 3/16″ Plain S. Lock Washer (3/32″x1/32″) for fastening Hinge to Terminal Board.	
117773	**22**	**Case End Cover Plate**	12530–29
130220	**23**	**Latch** for Doors Refs. 3 and 3a	B–12531–23
52856	**24**	**Staple** (Used when doors are to be arranged for Padlock)	8191–84
	25	**Rivet,** 3/16″x3/8″ Rd. Hd. I. for fastening Ref. 24 to Case.	
	26	**Terminal Post** with Nuts, Washers and Lock Washers (Inc. 1-26a, 1-27, 2-28, 4-29 and 1-31)	12451
31668	**26a**	**Terminal Post only,** for Ref. 26	8094–706
29103	**27**	**Nut** for Ref. 26	8109–194
29101	**28**	**Nut** for Ref. 26	8109–193
29102	**29**	**Washer** for Ref. 26	7828–139

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL RELAY AND TERMINAL CASE
FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005
(Continued)

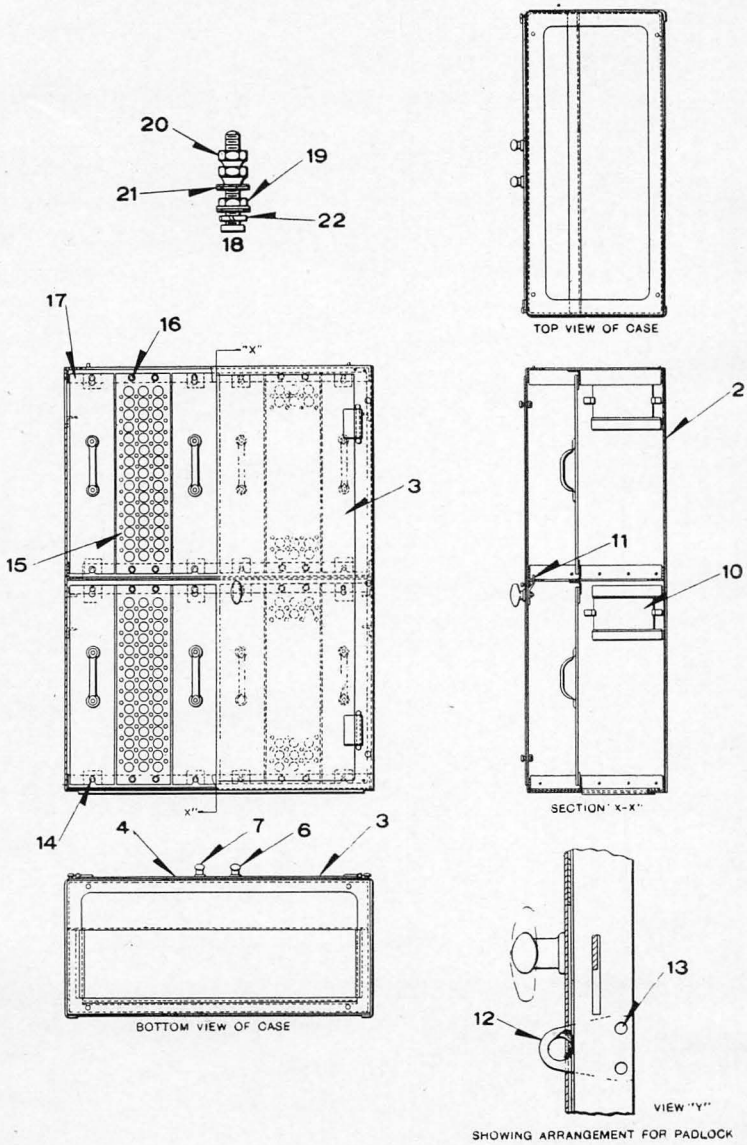
All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
117747	**30**	**Stud** with Nut Ref. 30a	12530–16
94344	**30a**	**Nut** for Ref. 30	8265–70
	31	**Plain S. Lock Washer** ($\frac{1}{8}$"x$\frac{1}{16}$") for Ref. 26.	
146642	**32**	**Terminal Board** (Used for A.R.A. Terminal Blocks)	B–10364–47

PLATE L-4020

UNION SWITCH & SIGNAL CO.



DETAILS OF STEEL TERMINAL CASE

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL TERMINAL CASE
FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	2	**Case only** (without Doors and Terminal Boards) ...	D–2315–5
117771	3	**R. H. Plain Door** ...	B–12531–3
117769	3a	**R. H. Glass Door** ...	B–12531–1
126952	3b	**R. H. Plain Door** (arranged for padlock) ...	B–12531–3
126951	3c	**R. H. Glass Door** (arranged for padlock) ...	B–12531–1
117772	4	**L. H. Plain Door** ...	B–12531–4
117770	4a	**L. H. Glass Door** ...	B–12531–2
117806	5	**Glass** for door Refs. 3a, 3c and 4a (Not shown)	12530–35
117753	6	**R. H. Door Knob** for Refs. 3, 3a, 3b and 3c ...	12530–22
117752	7	**L. H. Door Knob** for Refs. 4 and 4a ...	12530–21
120190	8	**Frame** for Holding Glass (Not shown) ...	12530–54
	9	**Machine Screw No. 6-40x1/4"** Rd. Hd. S. for fastening Ref. 8 to Doors (Not shown).	
117773	10	**Case End Cover Plate** ...	12530–29
130220	11	**Latch** for Doors Refs. 3, 3a, 3b and 3c ...	B–12531–23
52856	12	**Staple** (Used when doors are to be arranged for Padlock) ...	8191–84
	13	**Rivet, 3/16"x3/8"** Rd. Hd. I. for fastening Ref. 12 to Case.	
117747	14	**Stud** with Nut Ref. 14a ...	12530–16
94344	14a	**Nut** for Ref. 14 ...	8265–70

UNION SWITCH & SIGNAL CO.

DETAILS OF STEEL TERMINAL CASE

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

(Continued)

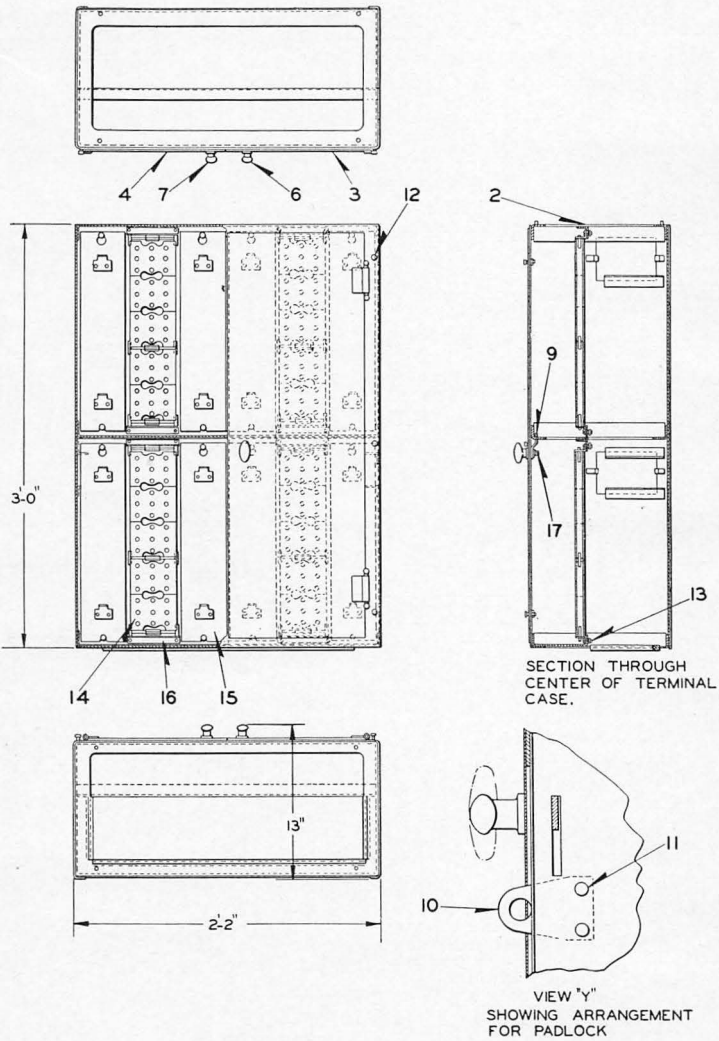
All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
150187	**15**	**Terminal Board only** (without Terminal Posts).....	B–10364–49
	16	**Stove Bolt,** 1/4″x1 1/4″ Rd. Hd. with Sq. Nut and 1/4″ Std. Plate Washer.	
150635	**17**	**Cover**.....	12530–65
	18	**Terminal Post** with Nuts, Washers and Lock Washer (Inc. 1-18a, 1-19, 2-20, 4-21 and 1-22).....	12451
	18a	**Terminal Post only,** for Ref. 18.....	8094–706
29103	**19**	**Nut** for Ref. 18.....	8109–194
29101	**20**	**Nut** for Ref. 18.....	8109–193
29102	**21**	**Washer** for Ref. 18.....	7828–139
	22	**1/4″ Plain S. Lock Washer** (1/8″x 1/16″) for Ref. 18.	

PLATE L-4021

UNION SWITCH & SIGNAL CO.



DETAILS OF STEEL TERMINAL CASE

UNION SWITCH & SIGNAL CO.

STEEL TERMINAL CASE
DETAIL PARTS

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
173650	**2**	**Case only,** without doors and Terminal Boards	D–2315–8
117771	**3**	**R. H. Plain Door**	B–12531–3
117769	**3a**	**R. H. Glass Door**	B–12531–1
126952	**3b**	**R. H. Plain Door** (arranged for padlock)	B–12531–3
126951	**3c**	**R. H. Glass Door** (arranged for padlock)	B–12531–1
117772	**4**	**L. H. Plain Door**	B–12531–4
117770	**4a**	**L. H. Glass Door**	B–12531–2
117806	**5**	**Glass** for doors, Refs. 3a, 3c and 4a (Not shown)	12530–35
117753	**6**	**R. H. Door Knob,** with Screw Ref. 17, Washer Ref. 18 and ¼" Plain Lock Washer ($\frac{1}{16}$"x$\frac{1}{16}$") for Refs. 3, 3a, 3b and 3c	12530–22
117752	**7**	**L. H. Door Knob** with Machine Screw Ref. 17a and ¼" Plain Lock Washer ($\frac{1}{16}$"x$\frac{1}{16}$") for Refs. 4 and 4a.	12530–21
120190	**8**	**Frame,** for holding glass (Not shown) for Refs. 3a, 3c and 4a	12530–54
	8a	**Machine Screw No. 6-40x¼"** Rd. Hd. S. for fastening Ref. 8 to Doors.	
130220	**9**	**Latch** for door, Refs. 3, 3a, 3b and 3c	B–12531–23
52856	**10**	**Staple** (used when doors are to be arranged for padlock)	8191–84
	11	**Rivet,** $\frac{3}{16}$"x⅜" Rd. Hd. I. for fastening Ref. 10 to Case.	
117747	**12**	**Conduit Cover Stud** with Nut Ref. 12a	12530–16

UNION SWITCH & SIGNAL CO.

STEEL TERMINAL CASE
DETAIL PARTS
(Continued)

FOR COMPLETE CASES REFER TO PLATES L-4001 AND L-4005

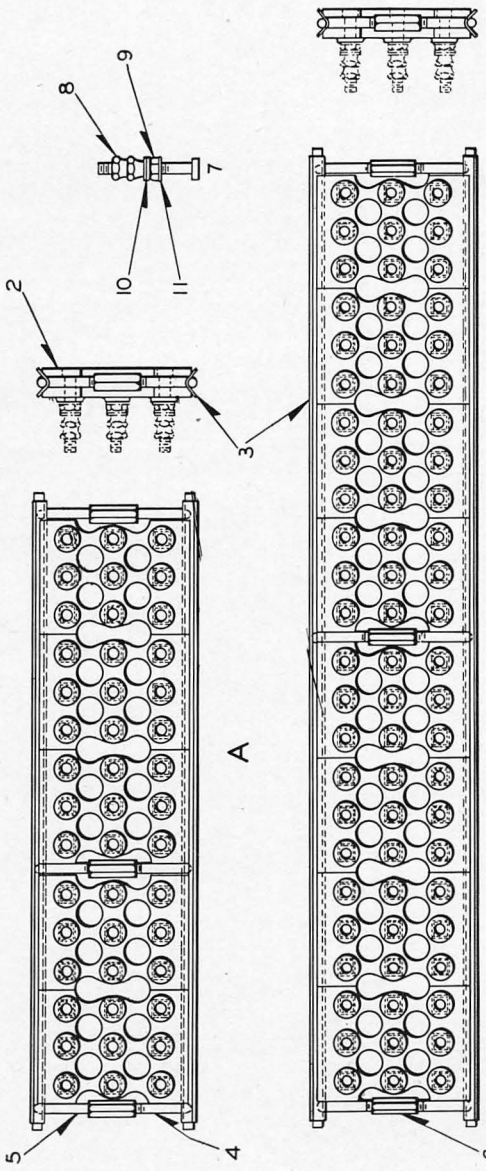
All Cases can be arranged for padlock as per View "Y" if so desired.

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
94344	**12a**	**Nut,** for Ref. 12	8265–70
	13	**Stove Bolt,** $\frac{5}{32}$"x**3/8**" Rd. Hd. with Sq. Nut and $\frac{3}{16}$" Plain S. Lock Washer ($\frac{3}{32}$"x$\frac{1}{32}$").	
160516	**14**	**Vertical Terminal Board** (45-Way) with Hook Bolts, and Turnbuckle (without Terminal Posts) for details see plate L-4030	B–10364–54
173525	**15**	**Cover** for Wire Chase	12530–71
173586	**16**	**Angle**	12530–88
	17	**Machine Screw No. 14-24x3/4"** Fil. Hd. S. for Ref. 6.	
	17a	**Machine Screw No. 14-24x5/8"** Fil. Hd. S. for Ref. 7.	
50682	**18**	**Washer** for Ref. 6	7826–117

PLATE L-4030

UNION SWITCH & SIGNAL CO.



TERMINAL BOARDS

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASES
DETAIL PARTS
TERMINAL BOARDS

FOR DETAILS OF TERMINAL BOARDS AND FITTINGS REFER TO PLATE P-7300

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
160516	**A**	**Vertical Terminal Board** (45-Way) complete, without Terminal Posts	B–10364–54
170271	**Aa**	**Vertical Terminal Board** (18-Way) complete, without Terminal Posts	B–10364–61
170270	**Ab**	**Vertical Terminal Board** (36-Way) complete, without Terminal Posts	B–10364–61
171974	**Ac**	**Vertical Terminal Board** (54-Way) complete, without Terminal Posts	B–10364–65
160517	**B**	**Horizontal Terminal Board** (72-Way) complete, without Terminal Posts	B–10364–54
159604	**2**	**Terminal Board only** (without Terminal Posts)	9968–939
160073	**3**	**Terminal Board Angle**, "Z" dim. $16\frac{5}{16}$", for Ref. A	12530–72
170279	**3a**	**Terminal Board Angle**, "Z" dim. $7\frac{1}{32}$", for Ref. Aa	12530–80
170272	**3b**	**Terminal Board Angle**, "Z" dim. $13\frac{5}{16}$", for Ref. Ab	12530–72
171975	**3c**	**Terminal Board Angle**, "Z" dim. $19\frac{5}{16}$", for Ref. Ac	12530–72
160146	**3d**	**Terminal Board Angle**, "Z" dim. 2′ $1\frac{5}{16}$", for Ref. B	12530–72
160083	**4**	**Hook Bolt** (with R. H. Threads)	7913–358
160084	**5**	**Hook Bolt** (with L. H. Threads)	7913–358
160074	**6**	**Turnbuckle**	8321–32
	7	**Terminal Post** with Nuts and Washers (Inc. 1-7a, 2-8, 1-9, 2-10 and 1-11)	12451–
130593	**7a**	**Terminal Post only**, for Ref. 7	8094–1192

UNION SWITCH & SIGNAL CO.

STEEL RELAY AND TERMINAL CASES

DETAIL PARTS

(Continued)

TERMINAL BOARDS

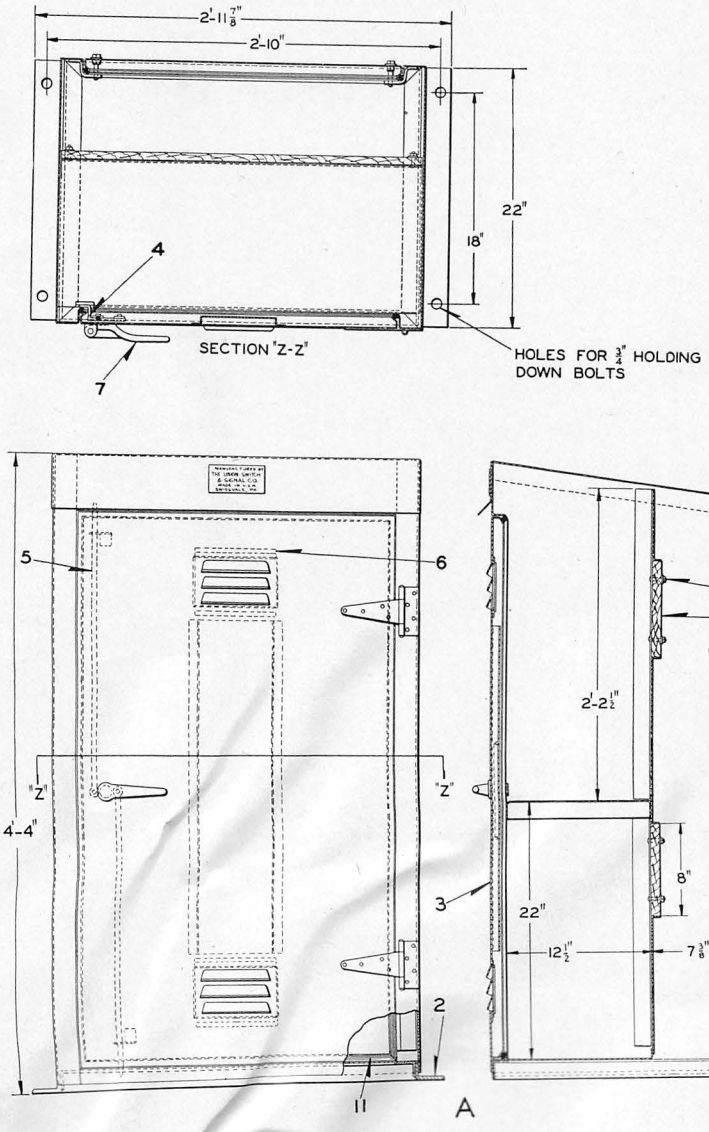
FOR DETAILS OF TERMINAL BOARDS AND FITTINGS REFER TO PLATE P-7300

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
29101	**8**	**Nut**	8109–193
29103	**9**	**Nut**	8109–194
29102	**10**	**Washer**	7828–139
29104	**11**	**Washer**	7828–138

PLATE L-4050

UNION SWITCH & SIGNAL CO.



SHEET STEEL RELAY AND INSTRUMENT CASE

UNION SWITCH & SIGNAL CO.

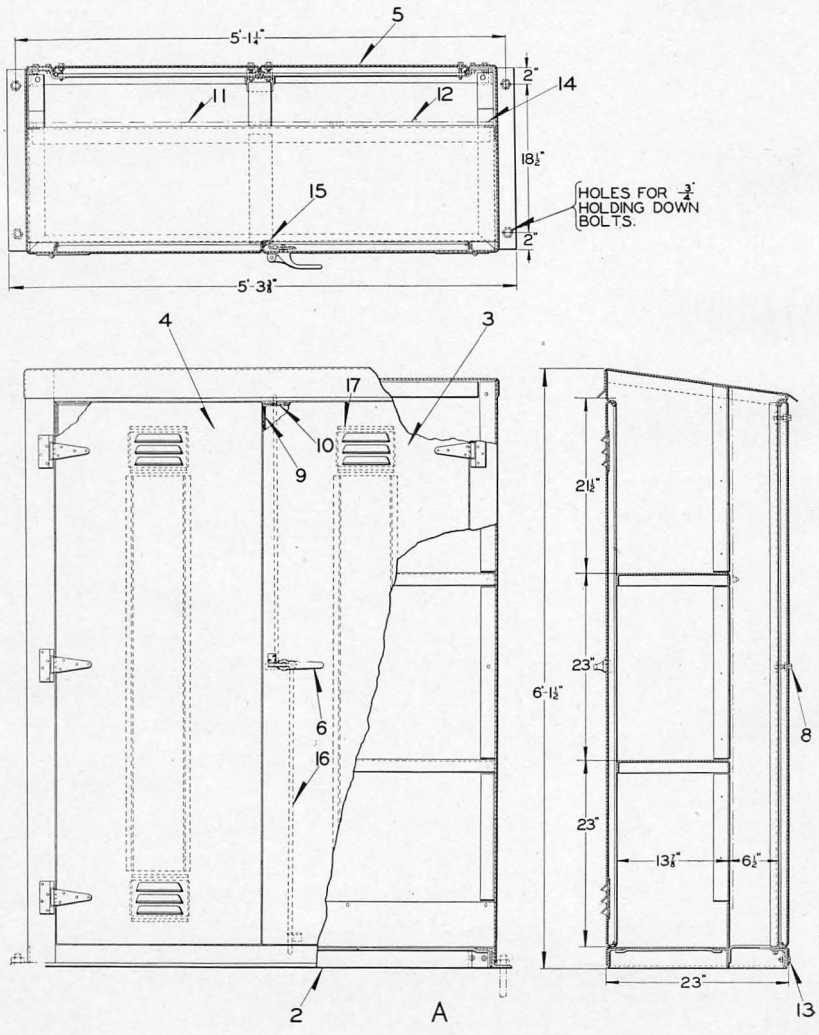
SHEET STEEL RELAY AND INSTRUMENT CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
176073	**A**	**Sheet Steel Relay and Instrument Case** complete, with one Steel Shelf, Front and Rear Doors, with removable Ventilator Screens	D-2439-6
176165	**2**	**Base** with two Studs Ref. 2a	C-9347-39
171096	**2a**	**Stud,** for Ref. 2	8114-777
176123	**3**	**Front Door** complete with Locking Rods, Ventilator Screens, Hinges, and Guides	C-9347-34
170666	**4**	**Link** with two Studs Ref. 4a	12464-19
171145	**4a**	**Stud,** with $\frac{1}{8}$″x$\frac{3}{4}$″ S. Cotters	8114-352
171988	**5**	**Locking Rod**	B-9996-10
176122	**6**	**Ventilator Screen**	7318-80
170385	**7**	**Door Handle**	8311-95
	8	**Machine Screw,** $\frac{5}{16}$″x$\frac{1}{2}$″ Rd. Hd. S. with $\frac{5}{16}$″ Plain S. Lock Washer ($\frac{1}{16}$″x$\frac{1}{16}$″) and $\frac{5}{16}$″ Plate Washer for Ref. 7 (Not shown).	
176190	**9**	**Rear Door**	C-9347-37
176188	**10**	**Terminal Board only**	B-10364-71
176189	**11**	**Tubing,** with $\frac{1}{8}$″x$\frac{5}{8}$″ S. Cotters (Cad. Pl.) and No. 14 Galv. I. Wire (12′ 5″ long)	B-9835-10
170379	**12**	**Bracket**	10914-304
	13	**Cap Screw, $\frac{3}{8}$″x1$\frac{3}{4}$″** Hex. Hd. S. with $\frac{3}{8}$″ Hex. Nut and $\frac{3}{8}$″ S. Plate Washer (Cad. Pl.) for Ref. 12.	
	14	**Machine Screw, $\frac{1}{4}$″-20x1$\frac{1}{8}$″** Rd. Hd. S. with $\frac{1}{4}$″ Hex. Nut and $\frac{1}{4}$″ S. Plate Washer (Cad. Pl.).	

PLATE L-4055

UNION SWITCH & SIGNAL CO.



4'-11" SHEET STEEL RELAY AND INSTRUMENT CASE

UNION SWITCH & SIGNAL CO.

4'-11" SHEET STEEL RELAY AND INSTRUMENT CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
170684	**A**	**Sheet Steel Relay and Instrument Case** with two Front Doors, two Rear Doors and three Shelves without Asbestos Board	D–2439–3
176146	**Aa**	**Sheet Steel Relay and Instrument Case** with two Front Doors, two Rear Doors, three Shelves and Asbestos Board	D–2439–3
177902	**2**	**Base**	C–9347–47
171096	**2a**	**Stud** for Ref. 2	8114–777
170407	**3**	**R. H. Front Door** with Link, Locking Rods, Guides, Screen and Handle	C–9347–11
170444	**4**	**L. H. Front Door** with Screens	C–9347–12
170343	**5**	**Rear Door**	C–9347–15
170385	**6**	**Door Handle**	8311–95
	7	**Machine Screw,** $\frac{5}{16}$"x$\frac{1}{2}$" Rd. Hd. S. with $\frac{5}{16}$" Pl. S. Lock Washer ($\frac{1}{16}$"x$\frac{1}{16}$") and $\frac{5}{16}$" Std. Plate Washer For Ref. 6 (Not shown).	
	8	**Cap Screw,** $\frac{3}{8}$"x1$\frac{3}{4}$" Hex. Hd. with $\frac{3}{8}$" Hex. Nut, and $\frac{3}{8}$" S. Plate Washer (Cad. Pl.).	
170482	**9**	**Canvas Covered Rubber Tubing** with No. 14 Galv. I. Wire (5' 8" Long) and ten $\frac{1}{8}$"x$\frac{5}{8}$" Cotters (Cad. Pl.)	B–9835–7
170483	**10**	**Canvas Covered Rubber Tubing** with No. 14 Galv. I. Wire (10' 4" Long) and twenty $\frac{1}{8}$"x$\frac{5}{8}$" Cotters (Cad. Pl.)	B–9835–7
176284	**11**	**Asbestos Board** for Ref. Aa	C–9347–43
178224	**12**	**Asbestos Board** for Ref. Aa	C–9347–43

UNION SWITCH & SIGNAL CO.

4′-11″ SHEET STEEL RELAY AND INSTRUMENT CASE

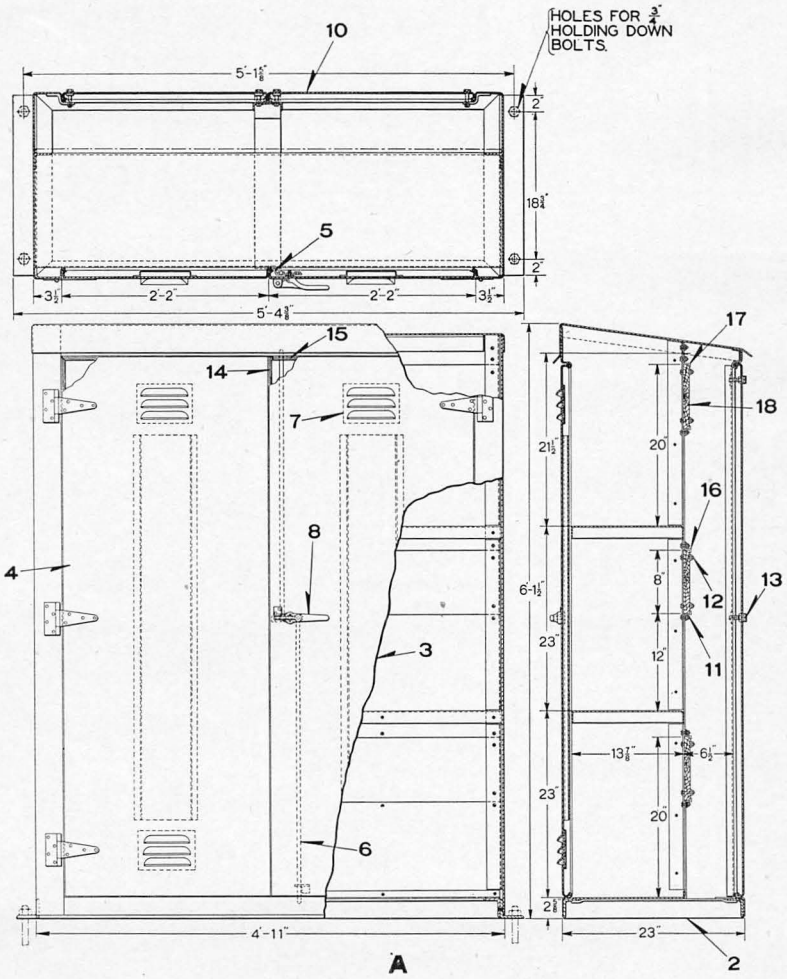
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	13	**Tap Bolt, 3/8″x1″** Hex. Hd. with 3/8″ Pl. S. Lock Washer (5/32″x1/16″) and 3/8″ Hex. Nut (Cad. Pl.).	
	14	**Machine Screw, 1/4″x1″** Rd. Hd. S. with 1/4″ Plate Washer and 1/4″ Hex. Nut (Cad. Pl.) for attaching 1/2″ Asbestos Boards to Case.	
170666	**15**	**Link** with two Studs Ref. 15a.....	12464–19
171145	**15a**	**Stud,** with 1/8″x3/4″ S. Cotter for Ref. 15.....	8114–352
170406	**16**	**Locking Rod**	B–9996–10
176122	**17**	**Ventilator Screen**.....	7318–80

PLATE L-4060

UNION SWITCH & SIGNAL CO.



SHEET STEEL RELAY INSTRUMENT CASE

UNION SWITCH & SIGNAL CO.

SHEET STEEL RELAY INSTRUMENT CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
176223	**A**	**Sheet Steel Relay Instrument Case** complete, with two Front Doors, Two Rear Doors, Three Shelves and Three Terminal Board Panels	D–2439–7
170663	**2**	**Base** with Four Studs Ref. 2a	C–9347–13
171096	**2a**	**Stud** for Ref. 2	8114–777
170407	**3**	**R. H. Front Door** complete, with Link, Locking Rods, Guides, Screens and Handle	C–9347–11
170444	**4**	**L. H. Front Door** complete, with Screens	C–9347–12
170666	**5**	**Link** with Two Studs Ref. 5a	12464–19
171145	**5a**	**Stud,** with $\frac{1}{8}$″x$\frac{3}{4}$″ S. Cotter for Ref. 5	8114–352
170406	**6**	**Locking Rod**	B–9996–10
176122	**7**	**Ventilator Screen**	7318–80
170385	**8**	**Door Handle**	8311–95
	9	**Machine Screw,** $\frac{5}{16}$″x$\frac{1}{2}$″ Rd. Hd. S. with $\frac{5}{16}$″ Plain S. Lock Washer ($\frac{1}{16}$″x$\frac{1}{16}$″) and $\frac{5}{16}$″ Plate Washer, for Ref. 8 (Not shown)	
170343	**10**	**Rear Door**	C–9347–15
	11	**Machine Screw No. 14-24x$\frac{5}{8}$″** Rd. Hd. S. with Hex. Nut Ref. 11a and $\frac{1}{4}$″ Plain S. Lock Washer ($\frac{1}{16}$″x$\frac{1}{16}$″) Cad. Pl.	
33217	**11a**	**Hex. Nut** for Ref. 11	8265–114
	12	**Machine Screw No. 14-24x1$\frac{1}{4}$″** Rd. Hd. S. with Hex. Nut Ref. 11a and $\frac{1}{4}$″ Plate Washer (Cad. Pl.)	

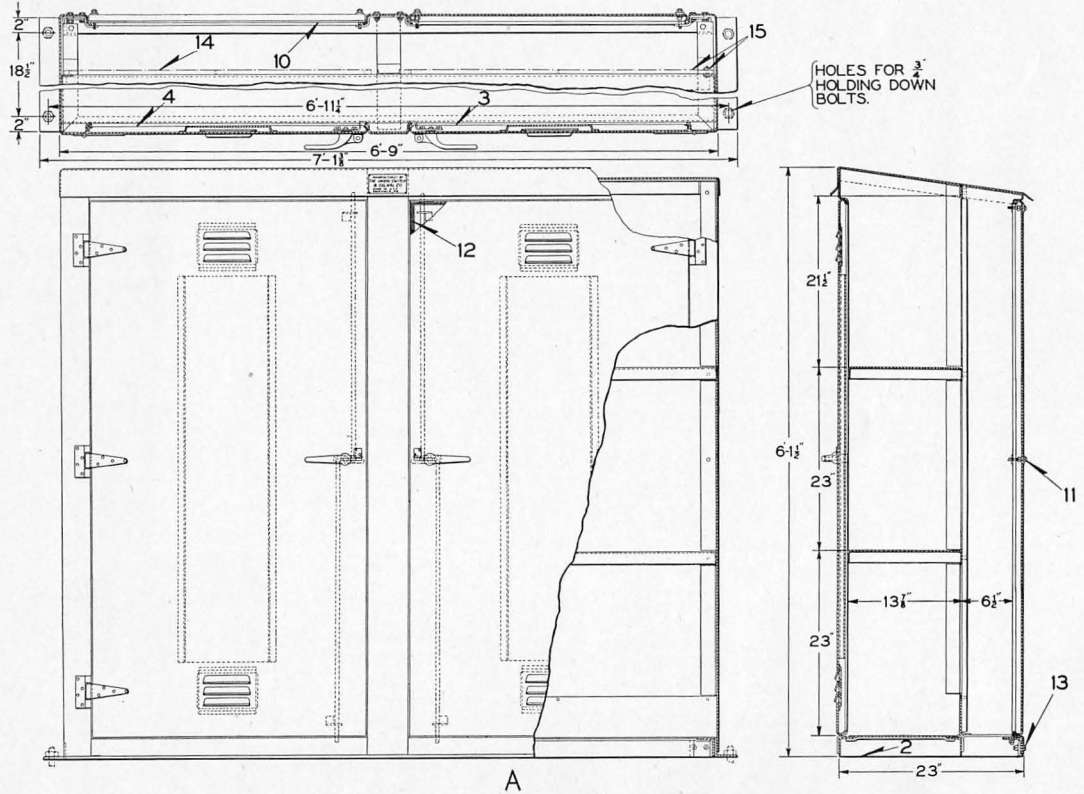
UNION SWITCH & SIGNAL CO.

SHEET STEEL RELAY INSTRUMENT CASE

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	13	**Cap Screw** 3/8″x1 3/4″ Hex. Hd. S. with 3/8″ Plate Washer and 3/8″ Hex. Nut (Cad. Pl.).	
170482	**14**	**Tubing** with No. 14 Galv. Iron Wire (5′ 8″ long) and ten 1/8″x5/8″ S. Cotters (Cad. Pl.)	B–9835–7
170483	**15**	**Tubing** with No. 14 Galv. Iron Wire (10′ 4″ Long) and twenty 1/8″x5/8″ S. Cotters (Cad. Pl.)	B–9835–7
176270	**16**	**Terminal Board Support**	C–9347–41
176271	**17**	**Terminal Board Support**	C–9347–44
176280	**18**	**Terminal Board Panel**	12443–220



6'-9" SHEET STEEL RELAY AND INSTRUMENT CASE

UNION SWITCH & SIGNAL CO.

6'-9" SHEET STEEL RELAY AND INSTRUMENT CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
172203	**A**	**Sheet Steel Relay and Instrument Case** with two Front Doors, two Rear Doors and three Shelves. Without Asbestos Board	D–2439–5
176339	**Aa**	**Sheet Steel Relay and Instrument Case** with two Front Doors, two Rear Doors and three Shelves. With Asbestos Board	D–2439–5
177901	**2**	**Base** with Four Studs Ref. 2a	C–9347–29
171096	**2a**	**Stud** for Ref. 2	8114–777
172177	**3**	**R. H. Front Door** with Link, Locking Rods, Guides, Screens and Handle	C–9347–27
172175	**4**	**L. H. Front Door** with Screens	C–9347–25
170666	**5**	**Link** with Two Studs Ref. 5a	12464–19
171145	**5a**	**Stud,** with $\frac{1}{8}$"x$\frac{3}{4}$" S. Cotter for Ref. 5	8114–352
170406	**6**	**Locking Rod**	B–9996–10
176122	**7**	**Ventilator Screen**	7318–80
170385	**8**	**Door Handle**	8311–95
	9	**Machine Screw,** $\frac{5}{16}$"x$\frac{1}{2}$" Rd. Hd. S. with $\frac{5}{16}$" Plain S. Lock Washer ($\frac{1}{16}$"x$\frac{1}{16}$") and $\frac{5}{16}$" Plate Washer.	
172178	**10**	**Rear Door**	C–9347–28
	11	**Cap Screw, 3/8"x1 3/4"** Hex. Hd. S. (Cad. Pl.) with $\frac{3}{8}$" Plate Washer (Cad. Pl.) and $\frac{3}{8}$" Hex. Nut (Cad. Pl.)	
172225	**12**	**Tubing** with No. 14 Galv. Iron Wire (16' 6" Long) and thirty-two $\frac{1}{8}$"x$\frac{5}{8}$" S. Cotters (Cad. Pl.)	B–9835–8

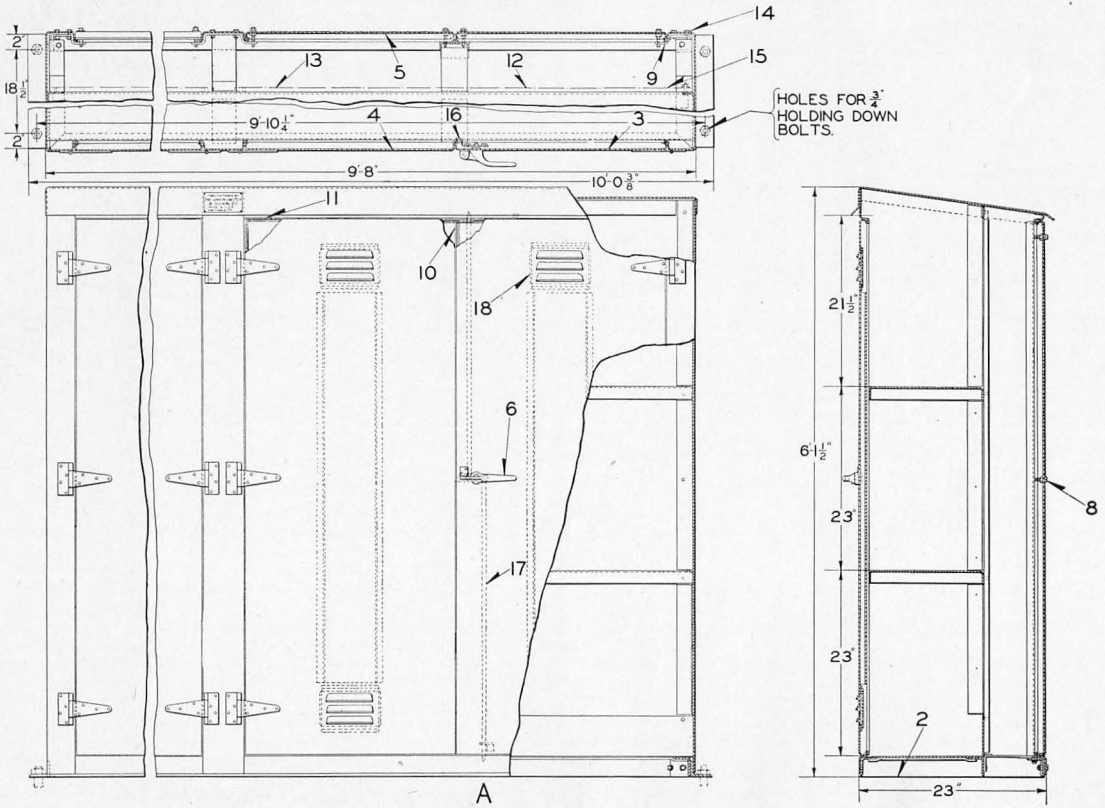
UNION SWITCH & SIGNAL CO.

6′-9″ SHEET STEEL RELAY AND INSTRUMENT CASE

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
	13	**Tap Bolt, 3/8″x1″** Hex. Hd. S. (Cad. Pl.) with 3/8″ Hex. Nut and 3/8″ Pl. S. Lock Washer (5/32″x1/16″) (Cad. Pl.).	
176284	**14**	**Asbestos Board** for Ref. Aa.....	C–9347–43
	15	**Machine Screw, 1/4″x1″** Rd. Hd. S. with 1/4″ Plate Washer and 1/4″ Hex. Nut (Cad. Pl.).	



9'-8" SHEET STEEL RELAY AND INSTRUMENT CASE

UNION SWITCH & SIGNAL CO.

9′-8″ SHEET STEEL RELAY AND INSTRUMENT CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
170408	**A**	**Sheet Steel Relay and Instrument Case** with four Front Doors, four Rear Doors and three Shelves, without Asbestos Boards	D–2439–4
176147	**Aa**	**Sheet Steel Relay and Instrument Case** with four Front Doors, four Rear Doors, three Shelves and Asbestos Boards	D–2439–4
177900	**2**	**Base**	C–9347–45
171096	**2a**	**Stud** for Ref. 2	8114–777
170407	**3**	**R. H. Front Door** with Link, Locking Rods, Guides, Screen and Handle	C–9347–11
170444	**4**	**L. H. Front Door** with Screens	C–9347–12
170343	**5**	**Rear Door**	C–9347–15
170385	**6**	**Door Handle**	8311–95
	7	**Machine Screw,** $\frac{5}{16}$″x$\frac{1}{2}$″ Rd. Hd. S. with $\frac{5}{16}$″ Pl. S. Lock Washer ($\frac{1}{16}$″x$\frac{1}{16}$″) and $\frac{5}{16}$″ Std. Plate Washer, for Ref. 6 (Not shown).	
	8	**Cap Screw,** $\frac{3}{8}$″x1$\frac{3}{4}$″ Hex. Hd. with $\frac{3}{8}$″ Hex. Nut, and $\frac{3}{8}$″ S. Plate Washer (Cad. Pl.).	
170379	**9**	**Bracket**	10914–304
170482	**10**	**Canvas Covered Rubber Tubing** with No. 14 Galv. I. Wire (5′ 8″ Long) and ten $\frac{1}{8}$″x$\frac{5}{8}$″ Cotters (Cad. Pl.)	B–9835–7
170483	**11**	**Canvas Covered Rubber Tubing** with No. 14 Galv. I. Wire (10′ 4″ Long) and twenty $\frac{1}{8}$″x$\frac{5}{8}$″ Cotters (Cad. Pl.)	B–9835–7
176284	**12**	**Asbestos Board** for Ref. Aa	C–9347–43

UNION SWITCH & SIGNAL CO.

9′-8″ SHEET STEEL RELAY AND INSTRUMENT CASE

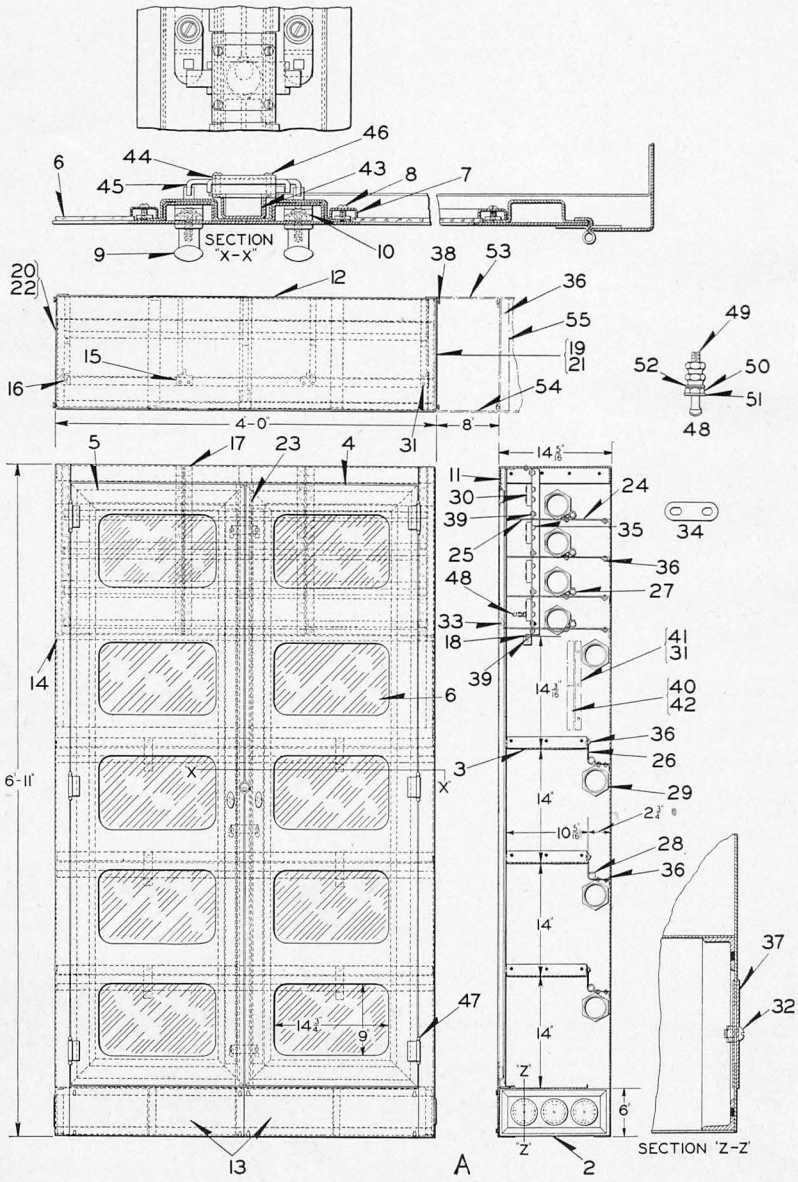
(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
176285	**13**	**Asbestos Board** for Ref. Aa	C–9347–43
	14	**Tap Bolt, 3/8″x1″** Hex. Hd. with 3/8″ Pl. S. Lock Washer (5/32″x1/16″) and 3/8″ Hex. Nut (Cad. Pl.).	
	15	**Machine Screw, 1/4″x1″** Rd. Hd. S. with 1/4″ Plate Washer and 1/4″ Hex. Nut (Cad. Pl.) for attaching 1/2″ Asbestos Boards to Case.	
170666	**16**	**Link** with Two Studs Ref. 16a	12464–19
171145	**16a**	**Stud** with 1/8″x3/4″ S. Cotter for Ref. 16	8114–352
170406	**17**	**Locking Rod**	B–9996–10
176122	**18**	**Ventilator Screen**	7318–80

PLATE L-4080

UNION SWITCH & SIGNAL CO.



STEEL TOWER RELAY CASE

UNION SWITCH & SIGNAL CO.

STEEL TOWER RELAY CASE

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
167664	**A**	**Steel Tower Relay Case** complete with two instrument Boards Ref. 40	D–2431–1
167135	**Aa**	**Steel Tower Relay Case,** without Instrument Boards	D–2431–1
166308	**2**	**Bottom Chase**	B–12695–1
166306	**3**	**Shelf**	B–12695–5
166271	**4**	**R. H. Door** complete with Glass	B–12695–6
166272	**5**	**L. H. Door** complete with Glass	B–12695–7
166274	**6**	**Glass** for Doors	B–12695–11
166269	**7**	**Frame** for holding Glass	B–12695–10
	8	**Machine Screw No. 6-40x3/8″** Rd. Hd. S. (Cad. Pl.) for Ref. 7.	
117753	**9**	**Door Knob** with No. 14-24x3/4″ Rd. Hd. S. Machine Screw, Washer Ref. 10 and 1/4″ Plain S. Lock Washer (1/16″x1/16″) Cad. Pl.	12530–22
50682	**10**	**Washer** for Ref. 9	7826–117
169015	**11**	**Top Cover**	B–12695–14
166307	**12**	**Back Plate**	B–12695–15
166360	**13**	**Removable Panel**	B–12695–16
166362	**14**	**Angle Support**	B–12695–17
166363	**15**	**Angle Support**	B–12695–17
166364	**16**	**Angle Support**	B–12695–17
166365	**17**	**Angle Support**	B–12695–17
166366	**18**	**Angle Support**	B–12695–17

UNION SWITCH & SIGNAL CO.

STEEL TOWER RELAY CASE

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
167706	**19**	**R. H. Side** for Ref. A	B–12695–12
167708	**20**	**L. H. Side** for Ref. A	B–12695–13
166356	**21**	**R. H. Side** for Ref. Aa	B–12695–12
166358	**22**	**L. H. Side** for Ref. Aa	B–12695–13
167770	**23**	**Door Strip**	B–12695–21
167202	**24**	**Wire Support Bracket**	B–12695–19
167203	**25**	**Wire Support Bracket**	B–12695–19
167204	**26**	**Wire Support Bracket**	B–12695–19
167205	**27**	**Wire Support Tube**	B–12695–19
167206	**28**	**Tube Clip**	B–12695–19
	29	**Chase Nipple 2½″** Galv., with 2½″ Galv. Lock Nut.	
164332	**30**	**Terminal Board** (Without Terminal Posts)	B–10364–57
	31	**Rivet,** $\frac{3}{16}$″x½″ Rd. Hd. I.	
	32	**Stove Bolt,** ¼″x½″ Rd. Hd. with Sq. Nut (Cad. Pl.).	
	33	**Stove Bolt,** ¼″x½″ Flat Hd. with Sq. Nut (Cad. Pl.).	
120343	**34**	**Connector** used with terminal Post Ref. 48	8064–305
	35	**Stove Bolt,** ¼″x1¼″ Rd. Hd. with Sq. Nut (Cad. Pl.) and ¼″ Plain S. Lock Washer ($\frac{1}{8}$″x$\frac{1}{16}$″).	
	36	**Stove Bolt,** ¼″x⅜″ Rd. Hd. with Sq. Nut (Cad. Pl.).	
167579	**37**	**Cover Plate**	B–12695–3
117747	**38**	**Stud** with Nut Ref. 38a	12530–16

UNION SWITCH & SIGNAL CO.

STEEL TOWER RELAY CASE

(Continued)

Order by Plate, Piece, Reference and Abbreviated Description Given in Heavy Face Type Only

Piece	Ref.	Description	Drawing Reference
28978	**38a**	**Nut** for Ref. 38	8265–104
	39	**Stove Bolt,** 1/4″x5/8″ Rd. Hd. with Sq. Nut (Cad. Pl.).	
167622	**40**	**Instrument Board**	12443–179
166367	**41**	**Angle Support**	B–12695–17
	42	**Stove Bolt,** 1/4″x1 1/4″ Rd. Hd. with 3/16″ Plate Washer (Cad. Pl.) and 1/4″ Plain S. Lock Washer (1/8″x1/16″) for Ref. 40.	
	43	**Yale Lock** (No. 501) Key No. 1616.	
168269	**44**	**Lock Plate**	B–12695–11
166276	**45**	**Latch Extension**	B–12695–20
	46	**Machine Screw No. 8-36x3/4″** Rd. Hd. S. (Cad. Pl.).	
	47	**Loose Pin** (Ball Tip) for 2 1/2″x2 1/2″ Polished S. Butts.	
	48	**Terminal Post** with Nuts and Washers (Inc. 1-48a, 2-49, 1-50, 1-51 and 2-52)	12451–
130593	**48a**	**Terminal Post only,** for Ref. 48	8094–1192
29101	**49**	**Nut**	8109–193
29103	**50**	**Nut**	8109–194
29104	**51**	**Washer**	7828–138
29102	**52**	**Washer**	7828–139
170111	**53**	**Back Case Conduit Cover**	B–12695–23
166421	**54**	**Case Conduit Cover**	B–12695–18
169116	**55**	**Cover**	B–12695–18